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Annual Report

OF THE

SCHOOL COMMITTEE



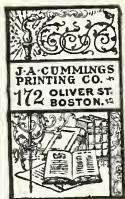
1904



City of Cambridge

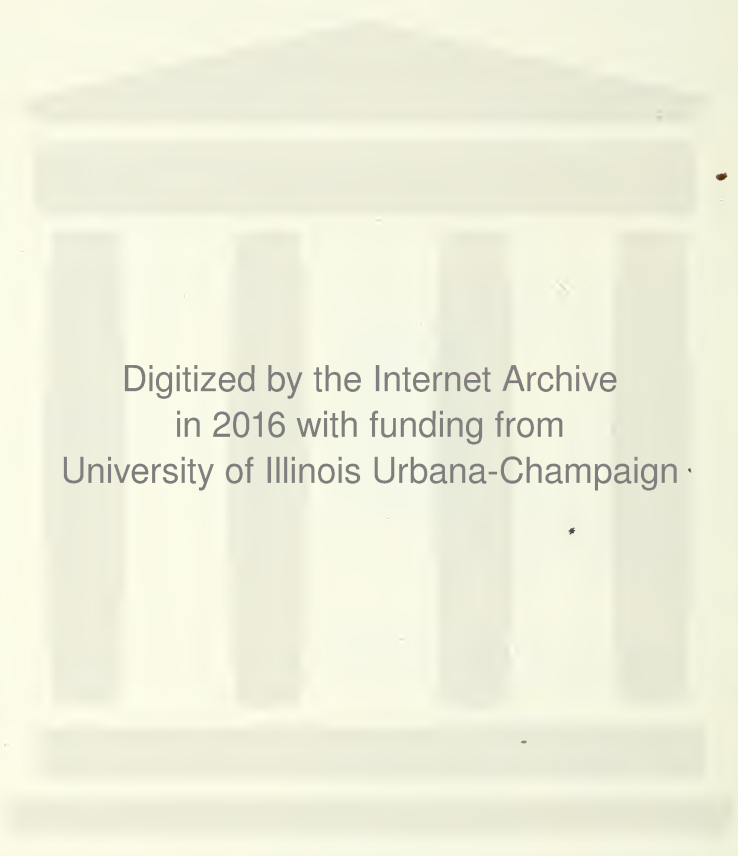
MASSACHUSETTS

GIFT FROM
DR. SAM'L A. GREEN,
BOSTON, MASS.



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REPORT OF THE SCHOOL COMMITTEE FOR 1904

In compliance with Section 44 of the Rules of the School Board, the Superintendent herewith submits his thirtieth annual report, it being for the year ending December 31, 1904:—

POPULATION OF CAMBRIDGE.

1875	47,838	1895	81,643
1885	59,658	1900	91,886
1904 (estimated)			97,826

SCHOOL CENSUS.

Number of children in the city five years old or more, but less than fifteen.

1885 (taken in May)	10,957	1895 (taken in May)	12,869
1890 (taken in May)	11,971	1904 (taken in September) . .	15,678

SCHOOLS AND CLASS ROOMS.

Latin School	1	Class rooms in use	15
English High School	1	“ “ “	11
Manual Training School . . .	1	“ “ “	10
Grammar Schools	7	“ “ “	92
Primary Schools	16	“ “ “	80
Grammar and Primary Schools .	10	“ “ “	113
Kindergartens	15	“ “ “	14
Evening Drawing Schools . . .	2	“ “ “	5
Evening High School	1	“ “ “	10
Evening Elementary Schools . .	4	“ “ “	27
Whole number of Day Schools . .			51
Number of class rooms for Day Schools			335

NUMBER OF TEACHERS IN THE DAY SCHOOLS.

[Special teachers are included in the total.]

December	Latin School	English High School	Manual Training School	Grammar Schools	Primary Schools	Kindergartens	Total
1900	22	24	14	173	142	26	409
1901	22	24	14	177	143	25	413
1902	24	24	15	179	140	25	417
1903	23	24	16	183	142	29	428
1904	23	24	19	187	142	29	435

REPORT OF SCHOOL COMMITTEE.

ATTENDANCE AT ALL THE DAY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	16,203	13,816	12,684	91.8
1901	16,065	14,144	13,021	92.1
1902	16,341	14,244	13,215	92.8
1903	16,394	14,397	13,250	92.0
1904	16,257	14,454	13,361	92.4

ATTENDANCE AT THE LATIN SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	430	404	385	95.2
1901	490	468	449	96.1
1902	488	465	441	95.1
1903	501	474	451	94.9
1904	516	487	465	95.5

ATTENDANCE AT THE ENGLISH HIGH SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	572	514	491	95.6
1901	613	517	490	94.8
1902	577	498	464	93.1
1903	583	493	470	95.3
1904	605	556	530	95.4

ATTENDANCE AT THE MANUAL TRAINING SCHOOL.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	212	192	183	95.5
1901	217	191	184	96.2
1902	254	242	229	94.4
1903	300	262	251	95.9
1904	351	315	302	95.9

ATTENDANCE AT THE GRAMMAR SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	7,192	6,295	5,891	93.6
1901	7,044	6,483	6,079	93.8
1902	7,359	6,711	6,316	94.1
1903	7,279	6,725	6,506	93.8
1904	7,322	6,701	6,316	94.3

ATTENDANCE AT THE PRIMARY SCHOOLS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	6,888	5,788	5,267	91.0
1901	6,815	5,840	5,310	90.9
1902	6,687	5,708	5,249	92.0
1903	6,711	5,755	5,227	90.8
1904	6,534	5,705	5,194	91.0

ATTENDANCE AT THE KINDERGARTENS.

Year	Number of Pupils Registered	Average Number Belonging	Average Daily Attendance	Per cent of Attendance
1900	909	623	467	74.9
1901	886	645	509	78.9
1902	976	620	516	83.2
1903	1,020	688	545	79.2
1904	929	690	554	80.2

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE LATIN SCHOOL.

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1900	84	14 years 5 months	70	14 years 5 months
1901	57	14 years 6 months	58	14 years 2 months
1902	60	14 years 5 months	88	14 years 4 months
1903	65	14 years 4 months	80	14 years 5 months
1904	67	14 years 5 months	91	14 years 7 months

NUMBER OF PUPILS GRADUATED FROM THE LATIN SCHOOL

Course, 5 years.

Year	Boys	Average Age	Girls	Average Age
1900	20	18 years 11 months	19	18 years 11 months
1901	22	18 years 7 months	34	19 years 0 months
1902	23	19 years 1 month	39	18 years 9 months
1903	18	18 years 4 months	31	18 years 10 months
1904	19	18 years 1 month	31	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1900	56	15 years 5 months	170	15 years 1 month
1901	46	14 years 11 months	145	15 years 0 months
1902	41	14 years 8 months	155	15 years 1 month
1903	58	14 years 8 months	192	15 years 0 months
1904	24	14 years 5 months	186	15 years 0 months

NUMBER OF PUPILS GRADUATED FROM THE ENGLISH HIGH SCHOOL.

Year	Boys	Average Age	Girls	Average Age
1900	23	18 years 2 months	45	18 years 8 months
1901	13	18 years 3 months	47	18 years 9 months
1902	25	18 years 7 months	61	18 years 9 months
1903	15	18 years 8 months	58	18 years 7 months
1904	12	18 years 7 months	64	18 years 9 months

NUMBER OF PUPILS ADMITTED TO THE LOWEST GRADE OF THE MANUAL TRAINING SCHOOL, WITH THE NUMBER OF GRADUATES.

Year	Admitted	Average Age	Graduated	Average Age
1900	74	15 years 0 months	16	19 years 0 months
1901	110	15 years 2 months	21	18 years 3 months
1902	127	15 years 2 months	23	19 years 2 months
1903	144	15 years 2 months	38	18 years 7 months
1904	194	15 years 0 months	30	18 years 3 months

NUMBER OF PUPILS GRADUATED FROM THE GRAMMAR AND PRIMARY SCHOOLS.

Year	Grammar Schools. Course, 6 yrs.	Average Age	Primary Schools. Course, 3 yrs.	Average Age
1900	582	14 years 11 months	1,423	9 years 7 months
1901	565	14 years 11 months	1,467	9 years 7 months
1902	643	14 years 11 months	1,460	9 years 6 months
1903	648	14 years 9 months	1,428	9 years 5 months
1904	708	14 years 10 months	1,444	9 years 6 months

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE
GRAMMAR SCHOOLS.

Year	In 4 years	In 5 years	In 6 years	In 7 years or more
1900	6 per cent	28 per cent	50 per cent	16 per cent
1901	6 per cent	28 per cent	50 per cent	16 per cent
1902	7 per cent	27 per cent	51 per cent	15 per cent
1903	6 per cent	26 per cent	53 per cent	15 per cent
1904	5 per cent	28 per cent	52 per cent	15 per cent

LENGTH OF TIME IN COMPLETING THE COURSE OF STUDY IN THE
PRIMARY SCHOOLS.

Year	In 2 years	In 2½ years	In 3 years	In 3½ years	In 4 years	In 4½ years or more
1900	2 per cent	2 per cent	59 per cent	6 per cent	22 per cent	9 per cent
1901	3 per cent	1 per cent	61 per cent	5 per cent	20 per cent	10 per cent
1902	2 per cent	2 per cent	62 per cent	4 per cent	20 per cent	9 per cent
1903	3 per cent	2 per cent	60 per cent	5 per cent	22 per cent	8 per cent
1904	3 per cent	3 per cent	54 per cent	6 per cent	24 per cent	10 per cent

NUMBER OF PUPILS IN THE LATIN SCHOOL, DECEMBER, 1904.

Grade	Boys	Girls	Total	Per cent
Fourteenth.....	41	32	73	.133
Thirteenth.....	40	36	76	.139
Twelfth.....	38	70	108	.197
Eleventh.....	51	71	122	.223
Tenth.....	74	95	169	.308
Total.....	244	304	548	

NUMBER OF PUPILS IN THE ENGLISH HIGH SCHOOL, DECEMBER, 1904.

Grade	Boys	Girls	Total	Per cent
Thirteenth.....	14	70	84	.148
Twelfth.....	22	81	103	.181
Eleventh.....	23	133	156	.274
Tenth.....	27	187	214	.376
Specials.....	3	9	12	.021
Total.....	89	480	569	

NUMBER OF PUPILS IN THE MANUAL TRAINING SCHOOL, DECEMBER, 1904.

Grade	Boys		Per cent
Thirteenth	50	This school is for boys only. It became a part of the public school system, January 1, 1899.	.122
Twelfth	81		.197
Eleventh	95		.231
Tenth	185		.450
Total	411		

NUMBER OF PUPILS IN THE GRAMMAR SCHOOLS, DECEMBER, 1904.

Grade	Boys	Girls	Total	Per cent
Ninth	292	369	661	.094
D	57	54	111	.016
Eighth	371	470	841	.119
C	88	94	182	.026
Seventh	448	511	959	.136
Sixth	585	573	1,158	.164
B	113	131	244	.035
Fifth	593	627	1,220	.173
A	141	200	341	.048
Fourth	697	631	1,328	.189
Total	3,385	3,660	7,045	

NUMBER OF PUPILS IN THE PRIMARY SCHOOLS, DECEMBER, 1904.

Grade	Boys	Girls	Total	Per cent
Third	916	790	1,706	.296
Second	1,025	820	1,845	.320
First	1,168	1,041	2,209	.384
Total	3,109	2,651	5,760	

NUMBER OF PUPILS AND TEACHERS IN THE KINDERGARTENS.

Year	Boys	Girls	Total	Number of Teachers
1902	358	364	722	25
1903	383	381	764	29
1904	378	364	742	29

NUMBER OF PUPILS BELONGING TO THE EVENING DRAWING SCHOOLS, WITH THE AVERAGE ATTENDANCE.

1899	1900	1901	1902	1903	1904
194 99	184 99	193 97	220 114	187 98	167 102

NUMBER OF PUPILS BELONGING TO THE EVENING SCHOOLS, WITH THE AVERAGE ATTENDANCE.

1899	1900	1901	1902	1903	1904
1,158 452	1,248 420	1,286 464	1,367 510	1,664 625	1,795 720

NUMBER OF PUPILS IN THE PRIVATE SCHOOLS IN CAMBRIDGE, INCLUDING THOSE IN THE PAROCHIAL SCHOOLS.

1899	1900	1901	1902	1903	1904
2,713	3,004	3,439	3,451	3,711	4,047

NUMBER OF AGE AND SCHOOLING CERTIFICATES ISSUED.

1899	1900	1901	1902	1903	1904
324	380	387	507 *354	565 *655	578 *859

* Issued to minors over sixteen years of age, in accordance with the law of 1902.

COST OF INSTRUCTION FROM 1840 TO 1874.

[In obtaining the cost per pupil for these years the number of pupils belonging to the schools in December has been used, as the average number cannot be obtained.]

Year	Number of Teachers	Number of Pupils	Whole Cost	Cost per Pupil
1840	20	1,388	\$6,747 00	\$4 86
1841	22	1,635	7,309 67	4 47
1842	23	1,871	8,374 32	4 47
1843	28	1,918	9,003 00	4 69
1844	31	2,000	9,609 75	4 80
1845	37	2,151	11,558 37	5 37
1846	38	2,227	12,940 00	5 81
1847	39	2,228	14,025 00	6 29
1848	43	2,408	16,996 42	7 05
1849	46	2,561	18,900 00	7 37
1850	49	2,597	20,025 00	7 71
1851	54	2,738	21,925 00	8 00
1852	58	2,929	23,125 00	7 89
1853	61	2,966	24,225 00	8 16
1854	62	3,047	27,216 55	8 93
1855	64	3,196	28,325 50	8 86
1856	70	3,289	29,425 00	8 94
1857	72	3,366	32,885 00	9 76
1858	78	3,744	34,075 00	9 10
1859	84	4,145	36,300 00	8 75
1860	88	4,417	37,550 00	8 50
1861	92	4,589	39,300 00	8 56
1862	93	4,851	39,650 00	8 17
1863	99	5,077	42,425 00	8 37
1864	105	5,277	56,675 00	10 74
1865	108	5,335	71,350 00	13 37
1866	115	5,578	75,975 00	13 62
1867	125	5,864	82,900 00	14 13
1868	134	6,167	91,400 00	14 82
1869	137	6,187	95,650 00	15 45
1870	145	6,483	105,250 00	16 23
1871	156	6,840	125,650 00	18 36
1872	165	7,133	137,900 00	19 33
1873	172	7,379	143,000 00	19 46
1874	184	7,816	157,550 00	21 35

COST OF INSTRUCTION IN THE DAY SCHOOLS.

[Salaries of teachers, superintendent, supervisor, agent, clerks, and truant officers.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	\$164,818 00	\$23 32
1880	182	7,175	130,371 75	18 17
1884	216	8,414	152,290 62	18 09
1888	241	9,756	175,773 80	18 02
1892	284	10,861	207,144 22	19 07
1894	312	11,166	228,873 48	20 50
1896	337	11,957	245,104 01	20 50
1898	364	12,907	268,182 97	20 78
1900	409	13,816	326,512 34	23 63
1901	413	14,144	336,149 80	23 77
1902	417	14,244	343,787 00	24 14
1903	428	14,397	349,179 80	24 25
1904	435	14,454	356,406 89	24 66

COST OF THE DAY SCHOOLS.

[This includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, of the care and *repair of schoolhouses, and of the transportation of pupils.]

Year	Number of Teachers in December	Average Number of Pupils	Whole Cost	Cost per Pupil
1876	176	7,066	\$200,894 09	\$28 43
1880	182	7,175	153,967 56	21 45
1884	216	8,414	203,234 56	24 15
1888	241	9,756	225,408 57	23 10
1892	284	10,861	266,651 02	24 55
1894	312	11,166	287,137 37	25 72
1896	337	11,957	316,090 83	26 44
1898	364	12,907	345,566 30	26 77
1900	409	13,816	417,554 00	30 22
1901	413	14,144	429,208 22	30 35
1902	417	14,244	427,356 71	30 00
1903	428	14,397	429,554 39	29 84
1904	435	14,454	450,310 44	31 15

COST OF INSTRUCTION IN THE EVENING SCHOOLS.

Year	Elementary	High	Drawing	Total
1900	\$3,375 00	\$1,874 00	\$1,430 00	\$6,679 00
1901	2,777 50	1,551 75	1,205 00	5,534 25
1902	3,218 50	1,682 75	1,298 00	6,199 25
1903	5,000 50	1,683 00	1,428 00	8,111 50
1904	5,708 00	1,577 50	1,343 00	8,628 50

* In accordance with the statutory definition of the support of public schools, the cost of the repair of schoolhouses has not been included in the cost of the schools since 1902 and will not be in the future.

FINANCES.

(For the financial year ending December 1, 1904.)

Cost of instruction in day schools	\$356,46 89
Cost of instruction in evening schools	8,628 50
Cost of care of buildings, day schools	61,215 16
Cost of care of buildings, evening schools	2,475 55
Cost of text-books and supplies, day schools	28,135 04
Cost of text-books and supplies, evening schools	403 23
Expended for care of truants	2,184 43
Expended for flags	105 60
Expended for incidentals	1,942 32
Expended for transportation of pupils	321 00
Expended for vacation schools	1,957 43
Expended on Kelley schoolhouse	789 87
Expended on Fletcher schoolhouse	48,973 55
Expended on Houghton schoolhouse	8,311 75
Expended on Rindge Manual Training schoolhouse	7,144 98
Expended on Washington schoolhouse	4,698 05
Expended for furniture	1,394 32
Expended for permanent improvements	5,999 15
Expended for alterations and ordinary repairs	23,245 68
	<u>\$564,332 50</u>

Deducting from the above the amount received from the Hopkins Fund, \$687.74, the tuition of State and Boston City Wards, \$937, the tuition of non-resident pupils, \$5,402, the amount received from sales and damages of books, \$633.14, and sales of old materials, \$317.86

7,977 74

The actual cost of the schools to the city is	\$556,354 76
Assessed value of real and personal estates, May, 1904	\$104,827,600 00
Ratio of expenditure for school purposes to the valuation of 1904 . . . . .	.0053

TABULAR VIEW.

DECEMBER 31, 1904.

Prepared by the Secretary of the School Committee.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Latin.....	William F. Bradbury..... *Theodore P. Adams..... Edwin L. Sargent..... John I. Phinney..... Max Benshimol..... Helen M. Albee..... Constance Alexander..... Mary A. Bachelder..... Alice C. Baldwin..... Almira W. Bates..... Margaret S. Bradbury..... Isabel S. Burton..... Alice D. Chamberlain..... Grace C. Davenport..... Etta L. Davis..... Caroline Drew..... Mary C. Hardy..... Rose Hardwick..... Mabel E. Harris..... Helen W. Munroe..... Louisa P. Parker..... Lena G. Perrigo..... Ethel V. Sampson..... Jennie S. Spring..... † Annie S. Dodge.....	\$3,000 2,000 2,000 2,000 1,800 950 950 950 950 750 750 950 800 700 850 950 950 950 950 950 950 950 950 850 950 950 600	548
English High.....	Ray Greene Huling..... Joseph A. Coolidge..... Francis L. Bain..... Chester M. Grover..... Grace L. Deering..... Caroline Close..... Bertha L. Cogswell..... Gertrude H. Crook..... Mary L. Cunningham..... Esther S. Dodge.. Agnes B. Goerwitz..... Ellen P. Huling..... Katherine H. James..... Jeannie B. Kenrick..... Maud A. Lawson..... Henrietta E. McIntire..... Mary Moulton..... Lillian C. Rogers..... Caroline A. Sawyer..... Emma A. Scudder..... Florence W. Smith..... Martha R. Smith..... Delia M. Stickney.....	3,000 1,700 1,000 1,400 1,200 950 950 950 800 950 900 600 800 850 950 950 950 950 950 950 950 950 1,200	569

* On leave of absence, in accordance with Section 69 of the Rules of the School Committee.

† Secretary and Librarian.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
English High, Continued..	Annie F. Stratton	\$850	
	*Martha L. Babbitt	600	
Rindge Manual Training...	Charles H. Morse	3,000	411
	Myra I. Ellis	1,300	
	Helen W. Metcalf	950	
	Mabel D. Watson	800	
	John E. Denham	1,000	
	Adolph C. Ely	1,100	
	Richard H. Gallagher	1,200	
	Evan W. Griffiths	1,050	
	Lewis D. Hill	1,500	
	James E. MacWhinnie	1,150	
	Edward R. Markham	1,500	
	Joseph M. Norton	1,100	
	Harry E. Rich	850	
	Walter M. Smith	1,200	
	Charles E. Stratton	1,000	
	James G. Telfer	1,500	
	Albert L. Ware	1,300	
	Percy F. Williams	1,000	
	John W. Wood, Jr.	1,500	
	*Myrta E. Smith	600	
Agassiz, { Grammar	Maria L. Baldwin	1,000	{ 147
{ Primary	Edith C. Arey	700	{ 117
	Addie B. Byam	700	
	Frances W. Dawson	700	
	Lillian G. Goodwin	700	
	Mary A. Parsons	700	
	Grace C. Stedman	700	
	Agnes L. Tracy	600	
Boardman, Primary	Elizabeth J. Karcher	790	353
	Mabel E. Blake	700	
	Nellie B. Blodgett	600	
	Harriette G. Gilmore	600	
	Blanche M. Gould	450	
	Malvina M. Joslin	700	
	Jennie B. Ross	500	
	Lucy A. Witham	650	
Cushing, Primary	Susan E. Wyeth	760	84
	Margaret E. Sheehan	600	
Ellis, Grammar	Edward O. Grover	2,000	539
	Nellie A. Hutchins	900	
	Caroline L. Blake	800	
	Adelaide G. Bunker	750	
	Emma A. Faulkner	700	
	Harriet Foster	700	
	Lottie L. Griswold	700	
	Louise H. Griswold	700	
	Ellen J. Hunt	700	
	Flora C. Ingraham	700	

* Secretary and Librarian.

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Ellis, Continued.....	Ida J. Mahoney Sarah W. Mendell Mary A. Stephenson Josephine C. Wyman	\$500 700 700 700	
Felton, Primary	C. Florence Smith Marcia R. Bowman S. Emma Davis Carrie H. Smith	770 700 700 700	160
Fletcher, { Grammar..... { Primary.....	George L. Farley Mary I. Chapin Ellen A. Cheney Mary A. Doran Mary N. Flewelling Katherine A. Gaskill Mary Godsell Elmira F. Hall Frances E. Higgins Martha B. Perkins Marion Prescott Susan L. Senter Eva A. Taylor Emma G. Wentworth	1,600 650 700 700 450 650 450 700 700 550 700 700 700 550	{ 137 { 448
Gannett, Primary.....	Mary A. Rady Annie M. Billings Margaret F. Sanderson Gertrude T. Sullivan	775 700 650 600	176
Gore, Primary.....	Frances E. Pendexter Charlotte A. Callahan Katherine L. Dolan Mary L. Dolan Minnie A. Doran Kate A. Hegarty Katherine L. McElroy Julia G. McHugh Mary E. Mulloney Anastasia Peters Nora E. Reardon	810 650 700 700 700 700 700 700 700 700 650	450
Harvard, Grammar.....	Thomas W. Davis Margaret B. Wellington Nellie A. Coburn Annie M. Street Addie L. Bartlett Winifred V. Cobb Frances Fabyan Margaret M. Fearn Estella J. French Mary F. Hill Annie B. Lowell Josephine MacDonald Waitie M. Nash Laura L. Parmenter	2,000 900 750 750 700 700 700 700 700 450 700 700 700 700	704

TABULAR VIEW—Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Harvard, Continued.....	Louise C. Patterson.....	\$700	
	Annie L. Prince.....	650	
	Elizabeth L. Setchell.....	700	
	Hortense O. Young.....	700	
Holmes, Primary.....	Catherine M. Doran.....	650	65
	Abby S. Taylor.....	500	
Kelley, { Grammar.....	Everett L. Getchell.....	2,000	{ 392
Primary.....	H. Warren Foss.....	1,000	{ 302
	Ella S. Danforth.....	900	
	Anna W. Browning.....	450	
	Josephine Day.....	700	
	Maude M. Dutton.....	700	
	Lucy M. Fletcher.....	700	
	Carrie M. Ford.....	500	
	Jennie C. Hardy.....	700	
	Emma J. Houlahan.....	600	
	Ellen A. Kidder.....	700	
	Catherine A. McLean.....	700	
	Mary E. Moran.....	450	
	Ethel I. Murch.....	700	
	Eva G. Oakes.....	700	
	Esther D. Paul.....	700	
	Carrie L. Power.....	700	
	Mary E. Regan.....	700	
Lassell, Primary.....	Frances E. Whoriskey.....	765	141
	Rose V. Collier.....	700	
	Mary E. Whoriskey.....	700	
Lowell, Primary.....	Eusebia A. Minard.....	765	75
	Agnes J. McElroy.....	700	
Merrill, Primary.....	Louise W. Harris.....	785	260
	Julia M. Davis.....	650	
	Henriette E. de Rochemont....	700	
	Daisy E. Haynes.....	650	
	Marion B. Magwire.....	700	
	Gertrude S. Thayer.....	500	
	Nellie F. Walker.....	700	
Morse, { Grammar.....	Mary A. Townsend.....	2,000	{ 547
Primary.....	Mary E. Towle.....	900	{ 226
	Marcia E. Ridlon.....	800	
	Ida J. Holmes.....	750	
	Ella T. Arnold.....	450	
	Elizabeth J. Baldwin.....	700	
	Edith M. Carman.....	450	
	Christina R. Denyven.....	700	
	Florence L. Gould.....	450	
	Ida M. Holden.....	650	
	Florence E. Hunter.....	700	
	Alice E. May.....	700	
	Helen Montague.....	650	
	Anna A. O'Connell.....	700	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Morse, Continued.....	Ella M. Pinkham.....	\$700	
	Elizabeth H. Richards.....	700	
	Mary E. Sawyer.....	700	
	Lucy M. Soule.....	700	
	Bertha J. Waldron.....	550	
	Mary E. Warren.....	700	
Otis, Primary.....	Ellen N. Leighton.....	785	276
	Frances Allen.....	700	
	Anna E. Callahan.....	700	
	Josephine M. Doherty.....	700	
	Luella M. Marsh.....	700	
	Anna N. Sullivan.....	600	
	Margaret Sullivan.....	700	
	Ellen C. Walsh.....	700	
Parker, Primary.....	Mary A. Knowles.....	780	246
	Lillian M. Cuddy.....	450	
	Mattie S. Cutting.....	700	
	Harriet R. Harrington.....	700	
	Agnes Marchant.....	700	
	Mary E. Mullins.....	500	
	Mary E. White.....	550	
Peabody, { Grammar.....	Frederick S. Cutter.....	2,000	{ 366
{ Primary.....	Charlotte A. Ewell.....	900	
	Mabel R. Coombs.....	800	{ 181
	Susan C. Allison.....	700	
	Anna F. Bellows.....	700	
	Katherine L. Carr.....	700	
	Grace LeBaron Esty.....	600	
	Ruth D. Foxcroft.....	500	
	Helen E. Hazard.....	700	
	Martha A. Parker.....	650	
	Bertha L. Stratton.....	500	
	Isadore M. Thompson.....	500	
	Dora Trefethen.....	700	
	Alice M. Tufts.....	700	
Putnam, Grammar.....	Frederick B. Thompson.....	2,000	643
	George B. Colesworthy.....	1,100	
	Eliza M. Hussev.....	900	
	Eliza S. Paddock.....	800	
	Grace Clark.....	750	
	Mary A. Carmichael.....	700	
	Anna L. P. Collins.....	700	
	Sarah M. Grieves.....	700	
	Hattie L. Jewell.....	700	
	Annie B. Josselyn.....	700	
	Nellie A. Kerrigan.....	500	
	Mary A. Macklin.....	550	
	Katharine I. Nicolson.....	700	
	Margaret T. O'Keefe.....	650	
	Annie A. Trelegan.....	700	
	Minnie F. Wilson.....	650	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Reed, Primary.....	Margaret T. Burke..... Elizabeth G. Nelligan..... Julia A. Robinson..... Clara W. Ruggli.....	\$770 700 700 650	157
Riverside, Primary.....	Elizabeth A. Tower..... Amanda M. Alger..... Mary A. Burke.....	770 700 700	149
Roberts, Grammar.....	W. Mortimer MacVicar..... Sara A. Bailey..... Emily R. Pitkin..... Susan M. Adams..... Beatrice Bennett..... Mary Blair..... Elizabeth M. Breslin..... Mary M. Brigham..... Susan L. Keniston..... Evelyn B. Kenney..... Ada M. Litchfield..... Nina M. Marsh..... Clara E. Phinney..... Ida G. Smith..... Caroline M. Williams.....	2,000 900 750 700 450 700 600 700 700 700 700 700 550 700 700	574
Russell, { Grammar { Primary	Arthur C. Wadsworth..... Mary S. Bingham..... Carrie J. Allison..... Fannie P. Browning..... Ella E. Buttrick..... Mary A. Connelly..... Louise F. James..... Anna M. Lyons..... Louise I. MacWhinnie..... M. Ursula Magrath..... H. Maud McLean..... Gertrude E. Russell.....	2,000 800 700 700 700 700 450 550 500 650 700 700	{ 354 { 105
Shepard, { Grammar { Primary.....	Evelyn J. Locke..... Mary F. Calnane..... Alice M. Gage..... Mary M. Gilman..... Theresa H. Mahoney..... Ellen O'Keefe..... Annie E. Welch..... Florence E. Worthing.....	900 700 700 700 700 600 500 650	{ 184 { 132
Sleeper, { Grammar..... { Primary	A. Estelle Ingraham..... Emily Bissell..... Butella E. L. Conland..... Evelyn M. Dormer..... Elizabeth O. Haynes..... Melissa M. Lloyd..... Margaret E. Quinn..... Blanche C. Trefethen.....	900 700 700 700 650 700 600 700	{ 131 { 181

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.
Tarbell, Primary.....	Emma J. Young.....	\$770	194
	Florence J. Alley.....	700	
	Carrie P. Pierce.....	700	
	Anna H. Welsh.....	600	
Taylor, { Grammar.....	Ella R. Avery.....	950	{ 131
	Mary A. Boland.....	700	
	Bridget T. Boyle.....	700	
	Lillian M. Canty.....	700	
	Lillian W. Davis.....	550	
	Elizabeth B. Gahm.....	700	
	Cecilia F. Leahy.....	700	
	Mary A. Maguire.....	500	
	Eleanor M. Stevens.....	550	
Thorndike, Grammar.....	Mabelle S. Welsh.....	650	535
	Ruel H. Fletcher.....	2,000	
	Harriet A. Townsend.....	900	
	Laura A. Westcott.....	750	
	Flora E. Cooter.....	550	
	Jennie W. Cronin.....	550	
	Grace W. Fletcher.....	700	
	Margaret J. Griffith.....	550	
	Harriet M. Hanson.....	700	
	Eulalia L. Herald.....	650	
	Lillian H. Kenney.....	600	
	Edith M. O'Brien.....	450	
	Ellen M. Plympton.....	700	
	Mabel A. Short.....	600	
	Lydia A. Whitcher.....	700	
Washington, Grammar....	John W. Freese.....	2,000	448
	Blanche E. Townsend.....	900	
	Alice P. Fay.....	750	
	Grace S. Beckwith.....	600	
	Katherine F. Callahan.....	550	
	Mary I. Ells.....	700	
	Katharine M. Greene.....	450	
	Winifred L. Kinsley.....	700	
	Emma Penney.....	700	
	Margaret J. Penney.....	700	
	Bessie H. Pike.....	700	
Webster, Grammar.....	Hattie Shepherd.....	700	770
	John D. Billings.....	2,000	
	H. Herbert Richardson.....	1,000	
	Alice C. Phinney.....	900	
	Martha N. Hanson.....	800	
	Ada A. Billings.....	750	
	Mabel T. Ashley.....	700	
	Charlotte M. Chase.....	700	
	Fanny F. Curtis.....	700	
	Susan I. Downs.....	700	
	Gertrude B. Duffy.....	650	
	Josephine Hills.....	700	
	Gertrude I. Johnson.....	700	

TABULAR VIEW — Continued.

Names of Schools	Teachers	Salaries	No. of Pupils Dec. 31, 1904.	
Webster, Continued	Minnie V. Reid.....	\$700		
	Harriette E. Shepard.....	700		
	Olive L. Slater.....	700		
	Maud A. Sumner.....	700		
	Ellen F. Watson.....	700		
	Katherine L. Wight.....	700		
Wellington, { Grammar....	Herbert H. Bates.....	2,500	{ 443	
Wellington, { Primary	Sarah J. Gunnison.....	1,000		
	Margaret Kidd.....	1,000	{ 278	
	Mary I. Vinton.....	1,000		
	Carrie H. Stevens.....	900		
	Grace F. Chamberlain.....	700		
	Training Class	7,953		
Willard, Primary	Katharine E. Hayes.....	810	529	
	Agalena Aldrich.....	550		
	Sally N. Chamberlain.....	700		
	Elizabeth M. Crowley.....	600		
	M. Elizabeth Evans.....	700		
	Ella F. Gulliver.....	700		
	Julia S. Gushee.....	700		
	Mary E. G. Harrington.....	700		
	Katherine M. Lowell.....	700		
	Mary A. O'Hara.....	700		
	Belle Menard	700		
	Eliza D. Watson.....	700		
	Grace R. Woodward.....	700		
Wyman, Primary.....	Addie M. Bettinson.....	730	219	
	Maria J. Bacon.....	700		
	Mary H. Brooks.....	700		
	Georgianna P. Dutcher.....	700		
	Genevieve S. Flint.....	700		
	Agnes Smith White	650		
Kinder- gartens	Boardman.....	Mary B. Pratt.....	700	53
		Hattie P. Russell.....	600	
	Corlett	*Sarah S. Wells.....	700	41
		Annie M. Dodd.....	600	
	Gannett	Carrie E. Shepherd.....	700	51
		Marion L. Akerman.....	600	
	Gore.....	Selma E. Berthold.....	700	58
		Freedrica Mark.....	500	
	Holmes	Clara A. Hall.....	700	16
	Lowell.....	Melinda Gates..	700	
		Annie L. Crane.....	500	55
	Merrill.....	Caroline A. Leighton.....	700	
		Gretchen K. Hager.....	600	50
	Peabody.....	Julia L. Frame.....	700	
		Irene L. Phelps.....	450	57
	Riverside.....	Edith L. Lesley.....	700	
	Olive M. Lesley.....	600		

* Died Jan. 16, 1905.

TABULAR VIEW — Concluded.

Names of Schools		Teachers.	Salaries	No. of Pupils Dec. 31, 1904.
Kinder- gartens	Shaw	Harriette E. Ryan.....	\$700	62
		Leonice S. Morse.....	600	
	Sleeper	Mabel S. Adams.....	700	57
		Caroline E. Simpson.....	600	
	Taylor	Mary F. Leland.....	700	61
		Della E. Cabot.....	550	
	Wellington	Gertrude M. Gove.....	700	44
		Florence Rice.....	600	
	Willard, A. M...	Alice V. McIntire.....	700	51
		Anna M. Gage.....	550	
	Willard, P. M...	Jennie S. Clough	700	51
		Eva C. Katon	500	

TEACHERS OF MUSIC — Agnes Gordon	\$700
Alice H. Nay	600
Nancy T. Dawe	600
DIRECTOR OF MUSIC — Frederick E. Chapman	2,000
ASSISTANT IN MUSIC — Georgia E. Martin	850
DIRECTOR OF DRAWING — Peter Roos	2,000
ASSISTANT IN DRAWING — Lucia N. Jennison	800
DIRECTOR OF NATURE STUDY — Sarah E. Brassill	1,000
DIRECTOR OF PHYSICAL TRAINING — Sara E. Boudren	950
INSTRUCTOR OF PHYSICAL TRAINING IN THE HIGH SCHOOLS — Bessie W. Howard	800
SUPERINTENDENT — Francis Cogswell	3,500
SUPERVISOR OF PRIMARY SCHOOLS — Mary A. Lewis	1,300
PERMANENT SUBSTITUTE IN PRIMARY SCHOOLS — Mary A. Driscoll	450
ASSISTANT IN PRIMARY SCHOOLS — Hattie A. Thayer	550
AGENT — Sanford B. Hubbard	2,100
CLERKS — Althea B. Frost	750
Sadie E. Kimball	600
PORTER — John Lemon	600
TRUANT OFFICERS — Lucian S. Cabot	1,000
John Carmichael	1,000
William H. Porter	1,000
Thomas F. Riley	1,000

SUMMARY.

Number of pupils in the Latin School	548
Number of pupils in the English High School	569
Number of pupils in the Rindge Manual Training School	411
Number of pupils in the Grammar Schools	7,045
Number of pupils in the Primary Schools	5,760
Number of pupils in the Kindergartens	742
Total	15,075
Number of pupils belonging to the public schools December 31, 1903	14,935
Increase of pupils, 1904	140
Increase of pupils, 1903	188
Increase of pupils, 1902	253
Increase of pupils, 1901	62
Increase of pupils, 1900	332
Increase of pupils, 1899	314
Increase of pupils, 1898	476
Increase of pupils, 1897	422
Increase of pupils, 1896	714
Increase of pupils, 1895	250
Increase of pupils, 1894	278
Average annual increase of pupils from 1894 to 1904 (inclusive)	312

COST OF INSTRUCTION.

Schools and Officers	Cost of Instruction	Average Number of Pupils	Cost per Pupil
Latin School	\$26,275 50	487	\$53 95
English High School	27,070 83	556	48 69
Rindge Manual Training School	23,167 16	315	73 55
Training School (Teachers)	14,976 34	755	19 84
Grammar Schools (except Training School)	131,448 91	6,280	20 93
Primary Schools (except Training School)	89,637 88	5,371	16 69
Kindergartens	18,932 77	690	27 43
Teachers of Sewing	1,900 00	....	....
Directors of Music	2,815 00	....	....
Directors of Drawing	2,730 00	....	....
Director of Nature Study	1,000 00	....	....
Directors of Physical Training	1,635 00	....	....
Substitute Teachers	1,784 25	....	....
Superintendent	3,500 00	....	....
Supervisor of Primary Schools	1,230 00	....	....
Agent	2,100 00	....	....
Clerks	1,450 00	....	....
Truant Officers	4,000 00	....	....
Porter	600 00	....	....
Tuition of Cambridge pupils in Belmont Schools	153 25	....	....
Total	\$356,406 89	14,454	\$24 66

Cost of instruction in Evening High School	\$1,577 50
Cost of instruction in Evening Elementary Schools	5,708 00
Cost of instruction in Evening Drawing Schools	*1,343 00
Total	\$8,628 50

* The Director of Drawing is principal of these schools. No part of his salary has been included in this amount.

REMARKS ON THE STATISTICS.

The number of pupils registered in the day schools during the year ending June, 1904, is 16,257; the average number belonging, 14,454; the average daily attendance, 13,361. In the per cent of attendance there has been an increase of four-tenths of one per cent. The number belonging to the schools in December, 1903, was 14,935; in December, 1904, 15,075; an increase of 140. The cost of instruction, which includes the salaries of teachers, superintendent, supervisor, agent, clerks and truant officers, is \$356,406.89. The total cost of the day schools which, in accordance with the statutory definition of the support of schools, includes the cost of instruction, of text-books and supplies, of incidental expenses, of the care of truants, of the care of schoolhouses and of the transportation of pupils, is \$450,310.44.

The average attendance at the evening schools during the school year 1903-1904 was 822, an increase of 99, and the number of teachers, including the principals, was 69. The total cost of these schools, which includes the salaries of teachers, the cost of text-books and supplies, of fuel, light and the salaries of janitors is \$11,507.28.

While Cambridge expends a large amount for her schools, there are *two hundred thirty-five* towns and cities in the State which make a larger expenditure in proportion to their wealth. In a list of the thirty-three cities, arranged numerically according to the percentage of their taxable property appropriated to the support of public schools for the year 1903-1904, Cambridge is the *twenty-eighth*. In a list of the towns and cities of the State, arranged numerically according to the sum appropriated for each child in the average membership of the public schools, Cambridge is the *forty-second*.

These statistics relating to the schools of the State are taken from the sixty-eighth annual report of the secretary of the State Board of Education.

TEXT-BOOKS AND SUPPLIES.

At a meeting of the Board in December the committee on supplies submitted a detailed report of the expenditures of that committee for the year. The report is as follows:—

In accordance with Section 30 of the Rules of the School Board, the Committee on Supplies submits its twentieth annual report, it being for the year ending July 1, 1904:—

Stock on hand July 1, 1903	\$5,675 79	
Purchases and expenditures to July 1, 1904	24,286 32	
		\$29,962 11
Cash sales and damages	\$558 14	
Delivered to schools, officers, etc.	22,765 70	
		23,323 84
Stock on hand July 1, 1904		\$6,638 27

The purchases and expenditures have been :—

For text-books	\$10,756 46	
Desk and reference books	262 96	
Copy books	689 33	
Apparatus and furnishings	2,391 57	
Printing, \$196 00; expressage and labor, \$361.64	557 64	
Repairing books, \$387.69; diplomas, \$213.14	600 83	
Tuning pianos	43 75	
Miscellaneous supplies, etc.	8,644 95	
		\$23,947 49
Less the value of exchanges		1,212 86
		\$22,734 63

The net cost of text-books and supplies is as follows :—

Stock on hand July 1, 1903	\$5,675 79	
Bills paid by City Treasurer	22,734 63	
		\$28,410 42
Less stock on hand July 1, 1904	\$6,638 27	
Cash paid to City Treasurer, sales and damages	558 14	
		7,196 41
We have, net cost of all schools and officers		\$21,214 01

or an average cost per pupil of \$1.468. The average cost per pupil per annum for twenty years has been \$1.275.

The annual cost per pupil for text-books and supplies since the introduction of the free text-book law is as follows :—

Year	Cost per Pupil	Year	Cost per Pupil	Year	Cost per Pupil
1885	\$1.880	1892	\$1.149	1899	\$1.225
1886	1.170	1893	1.109	1900	1 740
1887	1.051	1894	1.243	1901	1.203
1888	1.068	1895	1.152	1902	1.400
1889	0.960	1896	1.436	1903	1 306
1890	1 334	1897	1 094	1904	1.468
1891	1 248	1898	1.268		

The cost of each grade of schools for text-books and supplies is as follows :—

	Net Expenses	Cost per Pupil				
		1904	1903	1902	1901	1900
Latin School.....	\$1,547 27	\$2.177	\$3.463	\$3.990	\$3.935	\$6.804
English High School....	2,309 15	4.153	3.564	3.641	4.236	4.642
Manual Training School.	3,098 32	9.836	16.791	11.564	11.707	13.515
Training School, Teachers	786 76	1.042	.664	.707	.704	.....
Grammar Schools.....	5,727 00	1.397	1.070	1.152	1.068	1.747
Mixed Schools.....	4,744 54	1.342	.907	1.140	.933	1.573
Primary Schools.....	1,771 78	.441	.379	.528	.431	.396
Kindergartens.....	291 34	.422	.428	.630	.329	.692
Evening Schools.....	403 23	.....	.....	.....	.....	.....
Special Teachers.....	74 63	.....	.....	.....	.....	.....
Officers of Board.....	52 92	.....	.....	.....	.....	.....
Miscellaneous expenses (not chargeable to any grade).....	431 02	.....	.....	.....	.....	.....
	\$21,237 96	.....	.....	.....	.....	.....
Less profit on sales.....	23 95	.....	.....	.....	.....	.....
	\$21,214 01	\$1.468	\$1.306	\$1.400	\$1.203	\$1.740

The foregoing tables show that the expenditures for text-books and supplies have increased during the year 1903-1904 above those of the previous year by \$0.162 per pupil, and above the average for twenty years by \$0.193.

The greater part of this increase is in the expenditures for text-books, and is due to the introduction of the new series of geographies, grammars and readers in place of the old. The net cost of the geographies recently introduced into the lowest grades in which they are used respectively, is \$2,031.33; and of grammars, \$1,375.35. The cost of the McGuffey readers introduced this year is \$589.45.

The Latin school shows a decrease in the net expense. The English high school shows an increase in the cost of text-books and apparatus and furnishings. The Rindge manual training school shows a decided decrease from last year, because of the purchase last year of six machine lathes.

The grammar and mixed schools show an increase of \$0.381 per pupil due almost entirely to the introduction of new books, and the primary schools show an increase of \$0.062 per pupil due to the same cause.

The largest increase in purchases is for text-books, \$3,545.37. Other items showing increase are desk and reference books \$39.73, copy books \$14.50, printing \$34.50, diplomas \$17.51, and tuning pianos \$19.50.

The items showing decrease in cost are apparatus and furnishings \$182.55, expressage \$68.95, repairs to books \$287.02, and miscellaneous supplies \$725.63.

The appropriation made by the city council has not warranted the purchase of the two sloyd outfits recommended last year, and necessary if the provisions of the statutes for manual training in all grades are to be complied with. The pianos in the Riverside and Sleeper schools are not suitable for the work and should be replaced. A piano is needed in the Fletcher school hall, and this school will also require considerable expenditure for maps, charts and desk books in the near future.

It is expected that the Houghton school will be ready for occupancy at the opening of the schools in September, 1905; but this will not require a full equipment as it is understood that the furniture of the Washington school will be moved to that school.

The large increase in the number of pupils in the Rindge manual training school will make it necessary to increase the equipment of that school. A request for a special appropriation for this purpose should be asked for from the city council.

The number of pupils in the schools November 1, 1904, was 15,076, an increase of one hundred twenty-four over last year. There is an increase of one hundred thirty in the high schools, ninety-four of these being in the Rindge manual training school, while there is a decrease in the primary schools, owing to the opening of parochial schools. This increase in the more expensive grades will tend to increase the average cost per pupil still more in the future.

Taking the cost per pupil at \$1.275, the average cost for the past twenty years, it will require \$19,220 for the usual supplies for the schools for the coming year. To this should be added \$650 for sloyd outfits for two schools, \$550 for three pianos, \$500 to complete the introduction of geographies and grammars, making a total of \$20,920. An appropriation of \$21,000 should be asked for for the regular school supplies besides that which is needed for the equipment of the Rindge manual training school.

CHANGES IN TEXT-BOOKS.

The following is the rule relating to the changes in text-books:—
“All propositions for changes in text-books shall be made by the superintendent. Whenever he recommends a change he shall appoint two persons, one of whom shall be a teacher in the service of the city, who shall make written reports on the merits of the books recommended. These reports and a like report by the superintendent shall be kept on file in the office of the superintendent, open to inspection by members of the Board

only. All changes of text-books recommended to the Board shall be referred to the committee on text-books."

Under this rule the following text-books have been adopted by the Board during the year 1904.

For use in the high schools, Harper's Text Edition of the Anabasis, A Term of Ovid, Le Tour de la France, and Government in State and Nation.

For use in the grammar schools, Carpenter's Geographical Readers, and Stepping Stones to Literature.

For use in the primary schools, Wheeler's Primer, and First and Second Readers.

SCHOOL ACCOMMODATIONS.

The following is from the report of the committee on schoolhouses:—

In accordance with Section 30 of the Rules of the School Board, the Committee on Schoolhouses respectfully submits the following report:—

At a meeting of the Board in June it was voted that the Dunster, Sargent and Stearns schoolhouses be abandoned for school purposes.

The Dunster was sold to the society of St. Peter's church and has been fitted up and is occupied by a parochial school. The amount received was \$6,500, and it was voted by the city council that this should be expended for improvements and permanent repairs to school buildings. The Sargent and Stearns have not been disposed of.

The Fletcher schoolhouse on Elm street was completed and occupied, in September, the teachers and most of the pupils of the Sargent and Stearns schools being transferred to it. Thirteen rooms are occupied, thereby relieving the crowded condition of the Roberts, Kelley and Wellington schools.

The arrangement of classes in all of these schools has been very difficult as the buildings are so near each other that many children are compelled to pass one or another of them on their way to their own schools, causing much dissatisfaction to parents and pupils.

The total cost of the Fletcher school is:—

For Land	\$11,259 75
The building	57,129 12
Architect's fees	3,152 36
Heating and ventilation	7,577 00
Plumbing	4,327 50
Furniture	4,585 89
Fence, grading, sidewalks, etc.	1,821 05
Miscellaneous	1,433 13
	<hr/>
	\$91,285 80

The "Mill Pond Lot" on Bancroft and Gilmore streets which had been selected for a site for a schoolhouse proved to be unsuitable for this purpose and land was bought for the Houghton schoolhouse at the corner of Putnam avenue and Magee street. The foundations are now in and it is expected that the building will be ready to be occupied in September next. The building is to be a reproduction of the Peabody schoolhouse except in the construction of its roof. The appropriation for land and building is \$100,000, the land costing, in round numbers, \$9,000. The contract price for the building is \$67,067, not including architect's fees, heating, plumbing or grading.

The rapid increase in the number of pupils in the Rindge manual training school made it necessary to build an addition to the forge shop which with the necessary equipment cost \$7,278.79. Should this increase continue, as it undoubtedly will, the school will require the whole of the Washington schoolhouse in the near future. It now occupies five rooms in that building besides every nook and corner of the original building.

In accordance with suggestions of this committee to the superintendent of public buildings many extensive repairs and improvements have been made on the several buildings, and it is to be regretted that the thorough renovation of the basement of the Rindge manual training school was not included. It is hoped, however, that this will be made during the next summer vacation.

The following table taken from the report of the superintendent of public buildings shows the total expense for the care and repairs of the school buildings:—

For Janitor service	\$36,739 11
Janitors' supplies	1,578 57
Extra help	2,003 59
Fuel	20,914 69
Gas and electric lighting	2,454 75
Furniture	1,394 32
Repairs to buildings, etc.	23,245 68
	<hr/>
	\$88,330 71

JANITORS.

Section 31 of the city charter provides that "The mayor shall appoint the janitors of schoolhouses, subject to confirmation by the school committee, and may remove them at pleasure for cause assigned; and such janitors shall perform their duties under the direction of the school committee."

Under the direction of the committee on schoolhouses, the agent supervises and directs the work of the janitors, and reports to the commit-

tee such matters as seem to need consideration. The principals of the schools report each month whether or not the work is done in a satisfactory manner.

The following is from the report of the committee on schoolhouses : —

The improvement in the work and spirit of the janitor service noted last year has continued under the able management of Mr. John J. Roach, the head janitor, who has supervised the improvements in plumbing, heating and ventilation.

Messrs. Roach, Hughes, McDonald and the truant officers have been appointed constables.

SERVICE ENDED — COMMITTEE — TEACHER

In Memoriam

JAMES FRANK WENTWORTH

April 12, 1904

Member of School Committee

1903 — 1904

SARAH S. WELLS

January 16, 1905

Assistant Gore Kindergarten

1894 — 1897

Principal Corlett Kindergarten

1897 — 1905

PLAN OF THE SCHOOL REPORT.

For many years the subject matter and arrangement of the statistical part of the school reports have remained essentially unchanged. This has been done because statistics become increasingly valuable when continued on the same plan from year to year. For several years, with the exception of last year, the reports have also contained certain definite information relating to the organization and conduct of the schools, such as is frequently sought by parents and persons interested in school affairs. This has enabled the superintendent to answer many letters of inquiry by simply mailing a school report.

Last year the report was of an historical character and for the purpose of saving space the specific information relating to the organization and conduct of the schools was omitted. This year the usual plan is followed.

LATIN SCHOOL.

The following table shows the membership of the Latin school and the cost of instruction from year to year for five years :—

December	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1900.....	404	22	\$21,819 00	\$54 01	39
1901.....	468	22	23,710 34	50 66	56
1902.....	465	24	25,236 00	54 27	62
1903.....	474	24	25,472 00	53 74	49
1904.....	487	24	26,275 50	53 95	50

The cost of the Latin school to the city is less than the above sums by the amount received for the tuition of non-resident pupils. The amount received this year was \$1,144.

The course of study is arranged for five years, or for four years, and is almost wholly decided by the requirements for admission to Harvard University. Ten per cent of all the graduates have completed the work in four years. The following is the rule relating to the admission of pupils to the high schools :—

“Pupils who have received the diploma of a grammar school may, on recommendation of the master, be admitted to either high school without an examination. For other persons who desire admission, an examination shall be held at the beginning of the autumn term under the direc-

tion of the superintendent, but pupils who are qualified to join existing classes may be admitted at any time on application to the principal. No pupil from any grade in a grammar school shall be examined who does not present a satisfactory certificate of having pursued the required studies during the summer vacation."

From three-fourths to four-fifths of the graduates are usually recommended for admission without an examination. About one-half of the remaining part study during the summer vacation, as required by the rule, and take an examination in September. Pupils who pass a fairly good examination are permitted to attend either high school until the Christmas vacation, at which time their connection with the school as regular pupils ends unless their work has been satisfactory.

Diplomas of graduation signed by the mayor and the head master of the school are awarded to pupils of the high schools who have successfully completed the course of study or its full equivalent, and have sustained a good character.

For non-resident pupils the tuition is \$80 a year, payable in advance, — one-half at the beginning, and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

ENGLISH HIGH SCHOOL.

The following table shows the membership of the English high school and the cost of instruction for five years:—

Year	Average Number of Pupils	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1900	514	24	\$25,250 50	\$49 13	68
1901	517	24	26,265 58	50 80	60
1902	498	24	26,747 51	53 71	86
1903	493	24	27,109 83	54 99	73
1904	556	24	27,070 83	48 69	76

This school has for its object the preparation of its pupils for entrance upon active life. It has three distinct courses of study. The plan of the courses is that all pupils in the school shall pursue substantially the same subjects for their first year, but thereafter shall have increasingly divergent studies, open to choice within reasonable limitations and determined largely by aptitude and expectation of subsequent career.

The general course provides a broad, liberal training for boys and girls who expect to end their academic education with the high school,

and includes all subjects which are required for preparation to enter the State normal schools. All who propose to become teachers in grammar or primary schools should take this course.

The commercial course is designed to combine with studies which cultivate the mind in a broad way certain others which give special power in processes needed in business life. Bookkeeping is provided in the second year, shorthand and typewriting in the third and fourth, and economics in the fourth. This course should be taken by those boys and girls who expect to enter a commercial career.

The domestic science course is intended for those girls who, while gaining culture of mind, wish also to train the hand in arts that are needed constantly in the home. In the second year they work in wood with tools suitable to their strength and take up dressmaking. In the third year they learn cooking by theory and practice. In the fourth year they continue their cooking, and deal with the preserving of fruits, with sanitation, and with other problems of household economy.

The requirements for admission to this school and the rules relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils the tuition is \$80 a year, payable in advance, — one-half at the beginning, and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 1.30 P. M.

RINDGE MANUAL TRAINING SCHOOL.

The following table shows the membership of the manual training school and the cost of instruction from year to year for the past five years: —

Year	Average Number of Pupils.	Number of Teachers in December	Cost of Instruction	Cost per Pupil	Number of Graduates
1900	192	14	\$17,825 73	\$92 84	16
1901	191	14	17,988 33	94 18	21
1902	242	15	19,108 67	78 96	23
1903	262	16	21,125 50	80 63	38
1904	315	19	23,167 16	73 55	30

The cost of the manual training school to the city is less than the above sums by the amounts received from Harvard University for the instruction of a class of students during the summer vacation, and for the tuition of non-resident pupils. The amount received this year from both sources was \$4,130.

The course of instruction covers four years. An effort is made to give proper emphasis to the academic features of the course, and to make that work interesting and effective by bringing it into intimate relation with instruction in the mechanic arts.

The manual dexterity and the thorough knowledge of tools, machinery, and mechanical processes acquired in the shops, at an age when time can be most easily spared for such training, is of inestimable value in any scientific pursuit.

The sessions are five and one-half hours a day, instead of five as in the other high schools. About one-third of the time is given to the work of manual training, and the remainder to the subjects usually taught in high schools, with the exception of Latin and Greek.

The requirements for admission to this school and the rule relating to the granting of diplomas are the same as for the Latin school.

For non-resident pupils, the tuition is \$150 a year, payable in advance, — one-half at the beginning, and the other half at the middle of the school year. The sessions of the school begin at 8.30 A. M., and end at 2 P. M.

The following is from the report of the committee on high schools :—

In accordance with Section 30 of the Rules of the School Board, the Committee on High Schools respectfully submits the following report :—

The principal matter of interest during the last year was the changes in the courses of study in the various schools. The change in the Latin school was of a minor character and was only expected to result in a more even division of the work. That for the manual training school was more considerable and was made with a view to the increased efficiency of the school. At the English high school the changes were more extensive and sweeping, but it is too soon yet to form an opinion of the effect in either of the schools.

The committee would call the attention of the Board to the decreasing number of boys in the entering classes of the English high school. There is an undoubted tendency among both parents and pupils towards including manual training in the course of study in the high school for such scholars as do not intend to take the classical course. If this is the result of a well-defined conviction and is along the lines of general improvement in educational matters, it is undoubtedly the duty of the committee to accommodate itself to the desires and views of the citizens. The logical result of such a course would seem to be an ultimate disappearance of boys from the English high school. By the changes of study, the committee provided a commercial course as well as a general course which should be useful to boys who do not desire either a classical or a manual training course. Whether such boys will come to the

high school in increasing numbers in years to come as a result is at present problematical. All that can be said is that the present year showed no indication of such being the case. It should be borne in mind, however, that probably the pupils who entered this year in a very large majority of cases had already made up their minds as to their further education before the changes in the course of study were decided upon by the committee.

The teaching force in the high schools remains much the same, as might naturally be expected. The high school committee would call the attention of the Board, however, to the fact that this year as in previous years, some of our more experienced teachers have left us to accept similar positions elsewhere at higher salaries. In spite of the increase of salary which is granted to many of the teachers in the high schools from year to year, the committee should recognize the fact that Cambridge pays lower salaries for male teachers in its high schools than teachers receive elsewhere. This, coupled with the fact that Cambridge is looked upon as a place to find good teachers with some experience and that our teaching force may be said to be continually under inspection by superintendents and principals from other places, means that we shall constantly lose from our more experienced and promising teachers, and shall be obliged to recruit our forces from younger and more inexperienced men. The committee does not mean to suggest any remedy or to infer that any remedy is possible for this state of affairs; neither is the committee prepared to say that such a state of affairs is altogether undesirable.

The committee would call the attention of the Board to the fact that the increase of pupils in the Rindge manual training school required the employment of three additional teachers in this school. Experience has shown that in this particular school, the employment of male teachers is very desirable, and all three of the additional teachers selected were men. The result of this policy, however, is to increase the expense of the school, and the Board should understand that the manual training school is now by far the most expensive school in the city. The expense per pupil in this school is something like fifty per cent larger than in either of the other high schools.

The great increase in the number of pupils at the manual training school made necessary an enlargement of the forge shop which involved some changes in the boiler room and a general rearrangement of the forges and blowers. The delay in completing this work caused a great deal of confusion at the beginning of the school year, but the results will be very satisfactory. The number of pupils this year is even greater than was expected and the probable growth of the school during the next few years demands a large increase in the accommodations. As the Wash-

ington school building, one-third of which is now used by the Rindge manual training school, will be entirely given up for grammar school purposes as soon as the Houghton schoolhouse is ready for use, this committee has planned a readjustment of the classes, which will require some additional apparatus in each of the shops. Attention should be called to the dangerous and unhealthy condition of the basement of the old building where the lockers and toilet rooms are placed.

This committee wishes to suggest the desirability of utilizing the plant at this school in the evening. The demand for an evening manual training school is strong, and with the successful opening of such a school in Springfield, Massachusetts, under Mr. Warner, formerly one of our masters, and the use made by the young men from Cambridge of the evening trade school in Boston where a fee is charged, the time seems to have come for the opening of a manual training department as a part of our free evening school system.

The high school committee has continued the course in physical training for girls on substantially the same lines as laid down last year. The committee believes this course to be very beneficial in that it regulates to a large degree the athletic exercises of the girls. The condition of affairs in the schools with regard to athletic exercises is much more satisfactory than it was before the employment of a teacher. The gymnasium, however, is still without apparatus, and the committee feels that the value of the courses in physical training now given could be greatly increased at a small expense.

Without desiring to trespass upon the duties of the committee on schoolhouses, the high school committee would again call attention to the condition of the English high school. Some improvements were made during the summer vacation, but many of the rooms are still in poor condition.

MANUAL TRAINING IN OTHER SCHOOLS.

The statutes require that every town and city of twenty thousand or more inhabitants shall maintain, as part of both its elementary and its high school system, the teaching of manual training. The Rindge manual training school gives the required instruction to boys of the high school grade, and provision is made in the English high school for girls of this grade, sloyd being taught in the second year, and cooking in the third. Sewing in the grammar schools may be considered as meeting the requirement for girls in the grammar grades.

The requirement that manual training shall be taught in elementary schools as well as in high schools has not been fully complied with. Provision has been made for the teaching of this subject in only three of

the grammar schools. The superintendent hopes that in the near future provision will be made for the teaching of manual training in all the grammar schools, as required by statute. The work of manual training in all the schools is under the direction of the head master of the Rindge manual training school.

WELLINGTON TRAINING SCHOOL.

This school was opened in September, 1884, and differs from the other schools in this respect,—all the grades, except the eighth and ninth, are taught by young teachers. Their work, however, is done under the immediate supervision of a master and three assistants, who are held responsible for the instruction and management of the school. For several years the seventh grade has been taught by a graduate of the training class.

The object of conducting a school on this plan is to give Cambridge young women who desire to teach, and who have made special preparation for the work, an opportunity to gain experience under conditions favorable to their own success, and without prejudice to the interest of their pupils.

Graduates of the English high school or of the Latin school, who have also graduated from one of our State normal schools, are preferred candidates for the position of teacher in this school. Other persons of equal preparation may be appointed.

The required term of service is one year. Teachers are appointed on probation, and may be excused or dismissed at any time by the superintendent, with the approval of the committee on the training school.

No teacher is considered a graduate of the school until by vote of the training school committee she is admitted to the graduate class, which is known as class B.

The money compensation for the first three months, and until satisfactory service is rendered, is at the rate of two hundred dollars a year. For the remaining part of the year it is at the rate of two hundred fifty dollars.

Graduates temporarily employed as teachers in this school are paid at the rate of three hundred dollars a year. Graduates selected to act as substitutes in any school are paid at the rate of four hundred fifty dollars.

That the direct influence of the school may be continued, it is the duty of the master, or of one of the supervising teachers, occasionally to visit the schools of the graduates who are teaching in Cambridge. The school contains all the grades of the grammar and primary schools and a kindergarten.

By the rules of the school board the superintendent is authorized to employ as many substitutes and temporary teachers as may be necessary to take the places of absent teachers. These teachers are usually assigned to the training school, when not otherwise employed, that there may be at this school a sufficient number of teachers to make it practicable for the members of the training class to visit other schools.

The following is from the report of the committee on the training school:—

The Cambridge training school for teachers has completed another year of successful work. Its crowded condition has been relieved by the opening of the Fletcher school and the building itself has been repaired and strengthened and the walls and ceilings made more attractive.

No change has been made in the corps of regular teachers and the work of the school is similar in style and character to that done in former years.

Between September, 1903, and September, 1904, twenty-three pupil teachers were admitted to the school. Of these, eleven have completed the required year of service, eight are still connected with the school, and four have severed their connection to engage in other pursuits or to teach in other cities.

The school contains all of the primary and grammar grades and a kindergarten, the number of pupils being about eight hundred.

More than fifty per cent of the present teaching force in our primary and grammar schools, not including the Wellington, are graduates of this school, and it has become such an important factor in the educational machinery of the public school system in the city, that it would be difficult to carry on the work of the schools without its assistance.

GRAMMAR SCHOOLS.

The number of pupils in these grades on the first of December was seven thousand forty-five and the number of teachers, including masters and special teachers, was one hundred eighty-seven.

The cost of instruction for each pupil for the year has been \$20.93. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is \$30 a year, payable in advance,— one-half at the beginning, and the other half at the middle of the school year.

The course of study is for six years, but the schools are so classified as to give the pupils an opportunity to complete the course in four years or in five years. The average age of those who entered last September

was nine years eight months. The number of graduates in June was seven hundred eight, their average age being fourteen years ten months. Of these, 5 per cent completed the course in four years, 28 per cent in five years, 52 per cent in six years, and 15 per cent in seven years or more.

Pupils are promoted by classes from the primary schools at the beginning of the autumn term; but individual pupils may be promoted at other times, if it is deemed expedient by the supervisor of primary schools and the superintendent.

Promotions from grade to grade in the grammar schools, and from the grammar to the high schools, are made by the teachers under the direction of the masters and the superintendent. Pupils qualified to join existing classes may be admitted at any time on application to the master of the school. No regular pre-announced examinations are held in these schools, but the results of such written exercises and reviews as the teachers and masters may require from time to time may be used as a part of the basis of promotion.

The thoroughness with which the work is done in the grammar schools is shown in part by the ability of the pupils to do the work in the high schools. The pupils are admitted to the high schools on trial; and, by the rule of the high school committee, any pupil who fails to maintain a suitable rank is reported to that committee, and no pupil thus reported can continue in either high school, except by special vote. For the past four years, however, provision has been made by which these pupils have been allowed to remain in the English high school, and receive such instruction as would best fit them to enter again upon the regular work of the school at its reorganization in September.

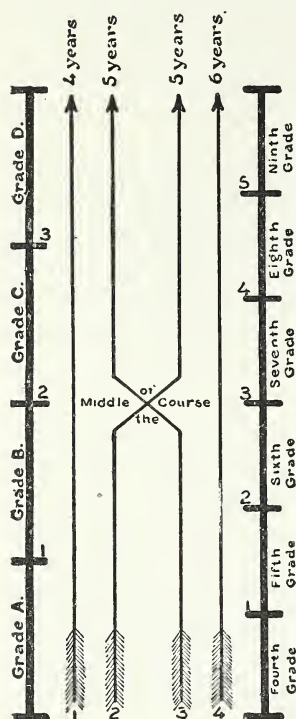
In the grammar schools, special teachers are appointed to help such pupils as seem able to do the work in less than six years, and to aid those who without personal instruction would require more than six years. This action of the committee removes the most serious objection to the graded system of schools.

The course of study is divided in two ways: (1) into six sections; (2) into four sections; each section covering a year's work. Pupils taking the course in six years are classified in six grades, called the fourth, fifth, sixth, seventh, eighth, and ninth grades. Those taking it in four years are classified in four grades, called grades A, B, C, and D. When pupils are promoted to the grammar schools they begin the first year's work together. After two or three months they are separated into two divisions.

One division advances more rapidly than the other, and during the year completes one-fourth of the whole course of study. The other division completes one-sixth of the course.

During the second year the pupils in grade B are in the same room

with the sixth grade. At the beginning of the year they are five months (one-half the school year) behind those in the sixth grade. After two or three months grade B is able to recite with the sixth grade, and at the end of the year both divisions have completed one-half the course of study — the one in two years, and the other in three years. The plan for the last half of the course is the same as for the first half, the grades being known as the seventh, eighth, and ninth in the one case, and as C and D in the other.



There are also two ways of completing the course in five years: (1) any pupil who has completed one-half the course in two years may at the end of that time be transferred to the seventh grade, and finish the course in three years; (2) any pupil who has completed one-half the course in three years may at the end of that time be transferred to grade C, and finish the course in two years. In both cases these changes can be made without omitting or repeating any part of the course.

It is now thirteen years since the schools were first classified on this plan. During this time seven thousand two hundred eighty-two pupils have graduated from the grammar schools. Of this number, 7 per cent completed the course in four years, 29 per cent in five years, 49 per cent in six years, and 15 per cent in seven years or more.

Of the number who entered the Latin school during the past ten years, 15.7 per cent did the work in the grammar schools in four years, 45.0 per cent in five years, and 36.3 per cent in six years. Of those who entered the English high school and took the general course, 10.2 per cent did the work in the grammar schools in four years, 40.5 per cent in five years, and 49.3 per cent in six years; of those who took the commercial course in the English high school, 9.1 per cent did the work in the grammar schools in four years, 35.9 per cent in five years, and 55.0 per cent in six years. Of those who entered the Rindge manual training school, 5.5 per cent did the work in the grammar schools in four years, 36.3 per cent in five years, and 58.2 per cent in six years.

Arrow No. 1 indicates the four years' course; grades A, B, C, D. Arrow No. 2 indicates one of the five years' courses; grades A, B, 7, 8, 9. Arrow No. 3 indicates the other five years course; grades 4, 5, 6, C, D. Arrow No. 4 indicates the six years' course; grades 4, 5, 6, 7, 8, 9.

During the past ten years, more than 50 per cent of the pupils entering the high schools did the work in the grammar schools in less than six years, 40.2 per cent doing it in five years, and 11.0 per cent in four years. It does not follow, however, that because so many did the work in less than the full time, the plan is a good one. Its value is shown, rather, by the thoroughness with which the work has been done, not in one year only, but in a series of years. The results of the first year's work in the high schools would seem to be a test of this thoroughness. The records in these schools show that for ten years the average per cent of the pupils who were four years in the grammar schools was higher than for those who were five years in the grammar schools, and that the per cent of those who were five years in the grammar schools was higher than for those who were six years in the grammar schools.

The average per cents of the first year's work in the different high schools for ten years are as follows : —

In the Latin school, the average per cent of the pupils who completed their grammar school work in four years is 80.3; of those who completed it in five years, 75.8; of those who completed it in six years, 72.1.

In the general course of the English high school, the average per cent of the pupils who completed the grammar school work in four years is 78.3; of those who completed it in five years, 75.9; of those who completed it in six years, 73.3.

In the commercial course of the English high school, the average per cent of the pupils who completed the grammar school course in four years is 73.5; of those who completed it in five years, 72.6; of those who completed it in six years, 70.3.

In the Rindge manual training school, the average per cent of the pupils who completed the grammar school work in four years is 73.4; of those who completed it in five years, 69.4; of those who completed it in six years, 67.9.

The following tables will be of interest as showing the results of the first year's work in the high schools of ten classes : —

IN THE LATIN SCHOOL.

RECORD OF TEN DIFFERENT CLASSES	FOUR YEARS IN GRAMMAR SCHOOLS	FIVE YEARS IN GRAMMAR SCHOOLS	SIX YEARS IN GRAMMAR SCHOOLS
First Year in High Schools	Average per cents in High Schools	Average per cents in High Schools	Average per cents in High Schools
Class of 1895.....	78.7	78.9	76.4
Class of 1896.....	80.4	77.0	71.6
Class of 1897.....	79.3	72.5	66.9
Class of 1898.....	77.1	72.3	67.8
Class of 1899.....	80.0	73.0	61.8
Class of 1900.....	81.1	75.9	75.4
Class of 1901.....	79.6	75.2	70.1
Class of 1902.....	81.0	77.5	74.7
Class of 1903.....	83.0	79.1	74.7
Class of 1904.....	81.0	76.6	75.9

IN THE ENGLISH HIGH, GENERAL COURSE.

Class of 1895.....	77.3	76.2	73.4
Class of 1896.....	85.9	75.1	76.4
Class of 1897.....	79.7	78.7	72.2
Class of 1898.....	77.6	75.8	77.0
Class of 1899.....	75.6	75.1	69.1
Class of 1900.....	79.2	73.4	71.1
Class of 1901.....	72.8	75.2	73.2
Class of 1902.....	82.2	75.3	74.3
Class of 1903.....	86.6	77.0	72.7
Class of 1904.....	75.3	76.6	75.4

IN THE ENGLISH HIGH, COMMERCIAL COURSE.

Class of 1895.....	73.7	73.5	69.8
Class of 1896.....	74.8	70.9	68.4
Class of 1897.....	76.3	69.0	69.3
Class of 1898.....	75.7	73.8	69.5
Class of 1899.....	69.5	68.5	68.9
Class of 1900.....	69.2	73.6	72.5
Class of 1901.....	76.0	73.6	70.5
Class of 1902.....	74.9	75.5	73.3
Class of 1903.....	74.3	76.6	70.9
Class of 1904.....	72.7	73.1	69.6

IN THE MANUAL TRAINING SCHOOL.

Class of 1895.....	72.6	65.4	65.9
Class of 1896.....	79.3	63.5	65.2
Class of 1897.....	78.6	67.2	61.7
Class of 1898.....	81.7	69.5	68.9
Class of 1899.....	....	67.5	67.8
Class of 1900.....	72.6	69.6	68.0
Class of 1901.....	80.0	67.8	68.4
Class of 1902.....	80.4	71.9	69.2
Class of 1903.....	70.4	73.5	70.3
Class of 1904.....	76.2	71.6	68.7

The results already given are based on the first year's work in the high schools. For four years results have been obtained based on the full course in the high schools. During these four years, two hundred seventeen pupils have been graduated from the Latin school. Of these two hundred seventeen, one hundred sixty were graduates of the Cambridge grammar schools. Of these one hundred sixty, twenty-six did the work in the grammar schools in four years, and their average per cent for the Latin school course was 83.9; ninety-two did the work in the grammar schools in five years, and their average per cent for the Latin school course was 76.9; forty did the work in the grammar schools in six years, and their average per cent for the Latin school course was 75.7; two did the work in the grammar schools in seven years, and their average per cent for the Latin school course was 67.8.

During these four years, two hundred ninety-five pupils have been graduated from the English high school. Of these two hundred ninety-five, two hundred forty-four were graduates of the Cambridge grammar schools. Of these two hundred forty-four, twenty-four did the work in the grammar schools in four years, and their average per cent for the high school course was 76.9; ninety did the work in the grammar schools in five years, and their average per cent for the high school course was 76.3; one hundred sixteen did the work in the grammar schools in six years, and their average per cent for the high school course was 75.4; fourteen did the work in the grammar schools in seven or more years and their average per cent for the high school course was 72.7.

These results do not indicate as thorough preparation for high school work as is desirable, but they do show that there are some pupils who can do the same amount of work as others in less time, and do it as well and even better. If it is said that the pupils who spent only four or five years in the grammar schools should have remained longer, it would be equally true that the time should have been lengthened for those who had been in these schools six years.

PRIMARY SCHOOLS.

The number of pupils in these grades on the first of December was five thousand seven hundred sixty, and the number of teachers was one hundred forty-two.

The cost of instruction for each pupil for the year has been \$16.69. This does not include the cost of supervision or the cost of the Wellington school.

For non-resident pupils the tuition is \$20 a year, payable in advance, — one-half at the beginning, and the other half at the middle of the school year.

The course of study is for three years. Children five years old are admitted to the first grade at the beginning of the school year and during the first week in March. Pupils qualified to join existing classes may be admitted at any time on application to the principal. At the present time, 38 per cent of the pupils are in the first grade, 32 per cent in the second, and 30 per cent in the third.

One thousand four hundred forty-four pupils graduated last June at an average age of nine years six months. Of these, 6 per cent completed the course of study in less than three years; 54 per cent in three years; 6 per cent in three years and a half; and 34 per cent in four years or more.

Promotions from grade to grade in the primary schools, and from the primary to the grammar schools, are made by the primary teachers, under the direction of the supervisor of primary schools and the superintendent. Promotions by classes are made annually at the beginning of the autumn term; but individual promotions are made at other times if it is deemed expedient by the supervisor of primary schools and the superintendent.

Pupils are promoted to the grammar schools on trial, and those who show by their work that they are unprepared are returned to the primary schools on the approval of the supervisor of primary schools and the superintendent.

Once a month the teachers of each grade meet the directors of special studies and the supervisor of primary schools. These meetings are held in the English high school building on Wednesday afternoons, half an hour after the close of the schools. The work for the coming month is planned; criticisms and suggestions in regard to methods are made; and questions from the teachers are answered and discussed.

Occasionally specimens of written work from all the pupils are brought for examination. In this way the amount of work done in the schools is made somewhat uniform; new teachers are kept informed as to the requirements, and pupils lose less time when a change of teacher or school becomes necessary.

The supervisor of primary schools writes as follows:—

During the year an effort has been made at the grade meetings not only to lay out the work for the next month, but to get an expression of opinion from the teachers on questions relating to the best interests of the pupils. With this end in view, the teachers have been invited to prepare brief and unsigned statements of their views on various subjects presented to them from time to time.

The best books on reading were first considered, and a decision arrived at as to which were the most useful for teaching and special drill,

and which were better for general reading. The order in which the books might be presented to the class was also considered. From the answers returned a list was obtained which met the general approval of the teachers.

Phonics and materials for desk work were next considered, also the question from what source the most practical course of spelling could be obtained.

The responses to the last query showed that the teachers were unanimously of the opinion that doing a little well was the sure way to success in teaching spelling to young pupils.

The old course of study was next considered. The answers, given with great freedom and good nature, not only indicated where the course of study pressed most heavily, but revealed the interpretation put upon some of the directions. The teachers are to consider the new course of study at the January meetings.

The need most felt at present is a number of the best and latest text-books on phonics, language and number for the teacher's desk. Most of the teachers object to any of the mechanical modes of teaching reading, but would be glad to avail themselves of the suggestions contained in several of the recent text-books. The latest ideas on methods in language and number would also be valuable.

In some of the districts need is felt of relieving the primary schools of the children over ten years of age. Many of these children are intelligent but began their school life late. They should be taught in a different manner from the young children and they are in danger of losing their self respect by being classified with others so much younger than themselves.

The librarian of the public library has asked the coöperation of the primary teachers in making the children's room helpful to the younger children. He and his assistant met the teachers and after an interesting talk on this part of the library work, requested that the teachers suggest in writing such books as would be desirable to add to the present list.

Great praise is due the teachers for their hearty response to suggestions made in the interest of their pupils; for the generous ways in which they try to make the children's school life attractive, and for the sympathetic manner in which they seek the good will and coöperation of the parents.

KINDERGARTENS.

The number of pupils in the fifteen kindergartens on the first of December was seven hundred forty-two, and the number of teachers was twenty-nine.

The cost of instruction for each pupil for the year has been \$27.43. This does not include the cost of supervision.

To be eligible to the position of teacher in a kindergarten, a person must have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching either in a kindergarten or a primary school, and must be able to play the piano.

Students in kindergarten normal classes are given opportunities to observe during their two years' course, and are allowed one month's experience in the first primary grade, but it is not deemed expedient for them to observe after graduation.

Teachers in kindergartens are to use their afternoons in visiting the homes of their pupils, with a view of maintaining friendly relations with the parents and of securing regularity of attendance, except when the time is needed for preparation for their work, and they are to make reports on blanks prepared for this purpose. The average number of visits made by both principal and assistant to homes of children is about one hundred fifty.

The following is from the report of the committee on kindergartens:—

From the time of the chairmanship of the Hon. Robert O. Fuller, it has been the aim of the kindergarten committee to add to the number of kindergartens yearly until the needs of the children of the kindergarten age were met. The committee has not yet attained its ideal, but progress has been made.

When the schools opened in September, the Dunster schoolhouse had been sold and such children as did not go to the parochial kindergarten were sent to the Peabody kindergarten. A new kindergarten was opened in the Holmes school and the principal of the Dunster kindergarten was transferred to it.

There is no district in Cambridge that needs a kindergarten so much as the Parker, but as yet it has not been found practicable to vacate a room in the Parker schoolhouse to accommodate a kindergarten.

The monthly mothers' meetings held by the kindergartners are a valuable part of the kindergarten work. These meetings have attracted attention and received honorable mention outside of Cambridge.

The kindergartners are faithful in calling at the homes of the children, and in this way and by the mothers' meetings a most effective co-operation is secured and a lasting work for good is accomplished.

A numerous signed petition from mothers in the vicinity of the Shepard school urges that a kindergarten be opened in connection with that school. As there is a suitable room available in that schoolhouse, the committee thinks it advisable that there be no delay in granting this request.

The following from the address delivered by Madame Ottelia Bondy before the kindergarten department at St. Louis in connection with the Louisiana Purchase Exposition is of special interest : —

“May I be permitted, first of all, to express my deepfelt satisfaction at being privileged to address this distinguished assembly as a delegate from the Association for Kindergartens and Infant Asylums in Austria, my native country?”

Austria has the proud distinction of having been the first country in Europe whose government, as early as 1872, regulated the didactic position of the kindergarten as an item of its general plan of education, without, however, making it compulsory as an integral part of the public schools. * * * * *

My associates were much encouraged by what I had to report to them about the admirable Froebel work done in this country when I came home from the World's Fair in Chicago, 1893. Now again, studying your marvelous exhibit in the Palace of Education, and having had the privilege of visiting kindergartens in this town and elsewhere, I shall be able to tell them that you are not flagging in your work, but rather progressing in your labor for the good of the earliest age, about which our great teacher, Froebel, says: ‘It is the most important one for education, because the beginning determines the manner of progress and the end.’

Your beginnings with the little ones are the best example I can take home with me to my country. You teach them to love God and all his creations; you teach them to go back to their homes with loving hearts and to honor the glorious star-spangled banner of their native land, which is just now giving an unparelled example of patriotism and of boundless development to the whole world.

These experiences I shall take back with me as the best gift which one nation can offer to another over the vast expanse of land and sea.”

SPECIAL STUDIES.

The committee on special studies has the supervision of the instruction in nature study, drawing, music, physical training and sewing.

NATURE STUDY.

The work in nature study includes the study of plant and animal life with some study of minerals and of weather phenomena.

The study of plants was first undertaken, and still makes up the larger part of the work. The study of animal life consists mainly of lessons on insects and birds. The mineral work is confined to lessons on common metals and on building stones.

Plants are studied in grades one to four, inclusive; insects in grades one, two, and four; birds in grade four; weather phenomena in grades one to three, inclusive; and minerals in grade four only.

Specimens chosen for study are those in which the pupils have a present interest, and all work is based on present experience. It is kept well within the capabilities of children, yet novel enough to require their best effort. Wherever it can be made to blend with other lines of school work, this is done.

The results sought are increasing knowledge of facts gathered by observation; familiarity with environment; and a growing sympathy with nature.

The following is from the report of the director of nature study to the supervising committee:—

When in 1894 nature study was made a part of the course in Cambridge, we were in touch with the best work that was being done in that line. Since that time, new ideas have come up to be tested and retained or dropped as they proved valuable or otherwise. Cambridge has kept in touch with all good work without following to extremes.

Slight changes in the course of study have been made from time to time as the work grew; they have been mainly changes to adjust the course to the time allowance, not changes in fundamental things, and they have been made gradually.

The best nature work now calls for lessons out-of-doors. During the year classes have been taken out from time to time from sixteen buildings. These outdoor lessons are not required but are voluntary on the part of the teachers. Twenty minutes of study out-of-doors is of more value than twice the time spent with specimens indoors.

Nature study also calls for actual work with seeds planted and tended by students. During the year pupils in every school except one, to the number of several thousands, were planting seeds at home. The plantings were in boxes on roofs and window sills, in flower pots, and in small back yards as well as in places where conditions were more favorable. The results have been varied but always interesting. In this work we owe much to a Boston firm who put up and sold excellent seeds in small quantities at a low price.

Nature study now calls for practical results in the way of improved school grounds. We have gardens in twelve of the school yards and in seven the decoration of the grounds is under way.

Nature work should bring about greater interest in the outdoor life about us. In the fourth grade, where the study of birds is taken up, the children are taught to provide food for the winter birds in order to bring them about the homes; they are taught the story of the brown-tail moth that they may do what children can to lessen its destructiveness.

These are among the newer features of the work. We would gladly make more use of the many parks in the city if some provision for doing so could be made. There is much that could be studied with profit especially by pupils in the more crowded parts of the city. All that we can do for ourselves we wish to do, but we need some help, for instance, for the first working of the soil and the securing of the loam for the school gardens.

In obtaining specimens for indoor work, the teachers are very unequally circumstanced. The specimens are obtained, but often with much expenditure of time and effort. Text-books for the pupils are not needed, but books like Huntington's "Trees in Winter" and Chapman's "Teachers' Manual of Bird Life" with the plates, are desirable, especially in the fourth grade.

DRAWING.

The course of instruction in drawing in the primary and grammar grades includes form, color and designing.

The study of form (pictorial representation) is carried through all the grades upon a plan involving type solids and natural forms of leaves, flowers and fruit. Construction drawing of objects and of simple original ornaments is gradually developed by progressive exercises. Geometrical drawing is introduced in the sixth grade and continued through the advanced grades. Drawing from nature receives special attention during the spring and autumn months.

Color is studied in all the grades, colored tablets being used in the primary grades and water colors in the grammar grades. Harmony and mixing of colors are treated as a science in special exercises; while color skill is artistically expressed in original designs and in nature study.

In design, particular attention is given to subjects involving fundamental principles of symmetry, balance, etc., and to methods of working out simple, specific problems in construction and in decoration.

In the English high school, drawing is a required study the first year, and is carried forward upon a plan of which the following is an outline:—

Drawing from objects and from casts, drawing from nature of plant form, drawing to scale, designing (constructive and decorative), and color harmony.

Drawing, designing, or water-color painting, may be taken as an elective study after the first year. The course of lessons includes landscape, still-life, and advanced designing.

In the English high school, the instruction in drawing is given by the director of drawing and his assistant. In the primary and grammar grades, it is given by the teachers under the supervision of the director

and his assistant. In the Rindge manual training school, there are two teachers of drawing, one of mechanical drawing and the other of free-hand, and the work is done under their immediate instruction.

The following is from the report presented by the committee on special studies:—

The subject of art study is pursued according to the plan adopted by the committee about five years ago. The director of drawing and his assistant divide the work in the schools so that each class in the primary and grammar schools is visited on an average once each month. Two-fifths of the assistant's time is given to the first year's class in the English high school and the remaining three-fifths to the primary schools.

The director of drawing gives the greater portion of his time to the grammar grades, visiting occasionally the primary classes and also giving weekly two hours to advanced classes in drawing and water color painting at the English high school. He supervises the work in the evening drawing schools, and instructs a volunteer class of teachers each Monday evening during the season of the evening schools.

The visits to the primary and grammar classes are for the purpose of inspecting the work done by the children, and also to illustrate the work to be done in the near future. It is important that the children should see the way work in drawing, designing and coloring is done by experts, and this opportunity comes to them through the visits of the supervisor and his assistant.

Besides the illustrations that may be executed before the class, the pupils are frequently treated to an exhibition of finished work, whereby they are enabled to form some idea of standards in workmanship and artistic qualities.

Perhaps no feature in the art course has greater interest for the children than the exercises in color study. Many of the lessons in this course are so connected as to make nature-drawing, designing and geometrical drawing, stepping stones, as it were, to the harmonious finish of some theme involving form, shade values and color.

The elementary science of color is very well covered in a series of exercises in color-mixing and in the several harmonies, as dominant, complementary, analagous and complex, the work necessary to a sound foundation in this subject. The children delight in doing even these un-picturesque diagrams by which is acquired, incidentally, considerable skill in drawing with the brush. The brush is, of course, a drawing tool that is more difficult to manipulate than pencil or chalk, but it is superior to either for some lines of work, and few children can be found that are unwilling to put forth their best efforts in color study. The enthusiasm in the subject is general among the pupils and teachers.

MUSIC.

The National and Educational Courses in Music are used by the regular teachers in the primary and grammar grades under the supervision of the director of music and his assistant. In the high schools it is given by the director. Every pupil who is capable of learning to sing is required to give attention to the subject.

In the Latin, English high and Rindge manual training schools, forty-five minutes a week are given to the study of musical form and expression as found in choruses, quartettes, etc., from the standard operas and oratorios.

Elementary harmony, counterpoint and composition have been introduced as elective studies for the second and first classes, and boys as well as girls having a special aptitude for music naturally elect these studies, the only requisite being some knowledge of the pianoforte. Pupils of the fourth year in the English high school may elect harmony in place of astronomy, and those intending to go to a normal school are advised to take the course in harmony.

The students are instructed in scale formation, intervals, a logical and comparative view of all true chords, in order to give them the power to construct and resolve these chords for themselves.

The study of harmony is carried well into modulation, and of counterpoint through four simple orders or species, including both the major and minor modes. Harvard College has passed a vote allowing a knowledge of harmony to count in an entrance examination to both Harvard College and the Lawrence Scientific school.

Two periods of fifty minutes each week are devoted to instruction, and occasionally the best compositions of the students are sung or played before the entire school, showing in this way the practical side of the work which will prove an important factor in future teaching.

In the Rindge manual training school the young men are taught to sustain their parts without accompaniment in compositions of four part harmony, (first tenor, second tenor, first bass and second bass) the music being selected and arranged for this purpose.

Fifteen minutes a day in the primary, and ten minutes a day in the grammar grades, are devoted to this study; and pupils in the grammar grades are taught to sing and sustain their parts in reading compositions in two, three and four parts.

Memorizing music is a feature in all the grades, including the high schools, and in all graduating exercises it is expected that the music by the pupils will be sung or played without notes. To this end rote singing in all the schools forms a part of the instruction in reading music.

PHYSICAL TRAINING.

The Ling system of physical training is used in the primary and grammar schools. Seven grades are regularly supervised, the classes of the eighth and ninth grades being supervised only when special request is made by their teachers.

Ten minutes are given each day to the work in the grammar grades and fifteen minutes in the primary grades. The instruction is given daily by the regular teachers in the different class rooms, under the supervision of the director of physical training, who visits each schoolroom as often as time will permit, and who also meets the teachers for special directions from time to time.

During the months of September, October, November, April, May and June, the primary classes have the privilege of out-of-door recesses, gymnastics forming a part of the daily programme during December, January, February and March only.

Games and marching are freely used until the third year, when a stronger emphasis is placed on formal gymnastics. Games are also frequently used in the lower grammar grades.

The essential aim of the teaching is to make the period one of healthful exercise and recreation, and also to counteract in part the tendency to spinal curvatures and flat chests caused by sitting so many hours a day at the school desks.

The following is from the report presented by the committee on special studies:—

The director of physical training urges that more time be given to gymnastic exercises in the grammar schools. Although supervision is not required in the eighth and ninth grades, several of the teachers of these grades have asked for assistance which has been gladly given so far as time would permit. The director again makes the suggestion that the wide corridors or the large basements of the new buildings be utilized for gymnastics. She also suggests that a plan be developed for extending the work permanently into the eighth and ninth grades and making it of such a character as to ensure physical gain and in this way form a link which shall connect the grammar schools with the high schools.

SEWING.

Sewing is taught to the girls of the three lower grades in the grammar schools, and to the boys of the fourth grade who desire the instruction. Forty minutes are given to the work once a week in each grade.

All the boys are learning to sew, the regular teacher having oversight of their work. The first lessons in sewing are spent in learning the use of the thimble and needle, in threading the needle, making knots, and fastening ends. Running stitches are made during this time on ruled pieces of cloth. Neatness is insisted upon from the beginning. Stamped patterns of stars or circles are worked in running stitch by the more forward. Then basting by measure is taught. Measuring cards are provided for this, and the stitches are made one-half inch in length, with spaces of one-eighth of an inch. All work is upon practice pieces, with colored thread. The first piece has three lines for running stitches and two for basting.

The second practice piece is of double cloth and has two lines of basting. On this piece stitching is taught, the children imitating machine stitching as nearly as possible. Two lines are done by all, and four lines by the best sewers, who also stitch their initials in the centre.

For the boys' sake, buttons are brought from home to be sewed on. Strips of cloth for this are basted by those who finish stitching before the others. The shoe button comes first as the simplest, then the two-holed button, then the four-holed. This is the kind of sewing most liked by the boys.

Those who first finish buttons, baste strips for overhanding. This is the last stitch taught in this grade. Those who wish, bring pretty pieces of cloth and make pin-balls. At the end of the year the boys take home all their work. The girls keep theirs for reference the next year.

The work in the fifth grade begins with folding and basting hems, the practice piece having a half inch hem on one edge, and a quarter inch hem on the other. Hemming is practiced until fairly well done, before beginning the model apron of calico, which is then hemmed on the sides and at the bottom.

In January the aprons are laid aside while gathering is taught. The rule for gathering is copied upon paper, and then practised upon cloth, with attention to the proper position of the hands. Stroking the gathers follows, and the new work is then applied to the model apron. The gathers are stitched to the belt, and the apron carefully finished.

Model pillowcases are given to those who have time to make them, which gives a little practice in overcasting.

Those who finish the year's work take home all the practice work of the two years.

During the first term in the sixth grade those who completed the fifth grade work are taught to make buttonholes, while the others finish their model aprons. After vacation all begin together upon darning on canvas. This being finished, they learn to run a thin place in stocking material, and then to darn a hole. When the darning is finished, buttonholes are

taken up again, and then matched patching. Those who have time for extra work practice feather stitching. Throughout the course great care is taken in securing the ends of the thread in beginning, joining and fastening off. The work now requires the services of two teachers besides that of the director.

The following is the course in sewing: *Fourth Grade*. Running, basting, stitching, sewing on buttons, overhanding and making pin-balls. *Fifth Grade*. Hemming, gathering, stroking gathers, model apron, over-casting and model pillowcase. *Sixth Grade*. Buttonholes, darning on canvas, darning a thin place in stocking, darning a hole in stocking and matched patching.

SCHOOL LIBRARIES AND THE PUBLIC LIBRARY.

The English high school has a library of about three thousand volumes. The Latin school has only about one-third of this number. Comparatively few books of a miscellaneous character have been added to these libraries for several years, the public library meeting the demand for such books. The need of the schools is for books of reference and for sets of books for class study.

The grammar schools, with the exception of the Morse and Webster, are not supplied with books for general reading. These are obtained from the public library, and during the year twelve thousand two hundred sixty-four books have been delivered to the schools.

The following is from the report of the librarian to the trustees of the Cambridge public library:—

A vigorous attempt has been made during the last half of the year in the direction of closer coöperation between the work of the library and that of the schools. The most important step in this matter was taken in the appointment in May of a new assistant, Miss Alice O'Brien, a native of Cambridge and a graduate of Boston University, to take charge of the children's room and of the special work of visiting the schools in the interest of the library. As a further means of stimulating interest in this work of coöperation, short, informal talks on the use of the library and of the children's room have been given by the librarian and Miss O'Brien in all of the grammar schools of the city, exclusive of the primary grades.

The results have exceeded all expectations. Not only did the talks seem welcome to the pupils in the schoolrooms, but they induced many to come to the children's room of the main library from long distances, partly to pay it a visit and partly to take out new cards and books. On Saturdays, especially, the children's room has been crowded, and the increased demand for books has left the shelves, at times, almost empty. The need of a larger appropriation to meet this special demand becomes more and more evident.

EVENING SCHOOLS.

This account of the evening schools is given by Mr. Hubbard, the agent of the school committee, who has the general supervision of these schools. The superintendent desires to call special attention to the suggestions in the report that the drawing class which now occupies rooms in the Central square building be transferred to the drawing room of the Rindge manual training school, and also that the Rindge manual training school be opened for evening classes.

There are seven evening schools — two drawing schools, one high school, and four elementary schools. In accordance with the rules of the school board, there are two terms of the evening schools. The first term begins on the second Monday of October, and continues every Monday, Wednesday and Friday evening until the end of the week before Christmas. The second term begins on the first Monday, Wednesday or Friday evening after the opening of the day schools in January, and continues thirty-five evenings. The sessions begin at half past seven and continue two hours. No session is held on the evening of a holiday, or during the vacations of the day schools.

The evening drawing schools are under the supervision of the director of drawing for the day schools. There are two of these schools, one for instruction in mechanical drawing, which occupies four rooms in the Central Square building, and one for instruction in free-hand drawing, which occupies the drawing room in the English high schoolhouse. In the mechanical school two courses are provided,—a three years' course in machine drawing, and a three years' course in architectural drawing. In the free-hand school provision is made for a three years' course in free-hand drawing. Diplomas are given to graduates of either course.

The evening high school is held in the English high school building, and offers a three years' course of instruction in the following subjects: arithmetic, bookkeeping, penmanship, English composition, English literature, civics, history, algebra, geometry, stenography, Latin, French and German. Diplomas are granted to graduates of the three years' course.

The elementary evening schools occupy rooms in four of the grammar school buildings, the Putnam, Roberts, Shepard and Webster. Reading, writing, arithmetic, geography, language, history and bookkeeping are taught in these schools in classes, so far as classification is possible, but a large part of the work is individual. No definite course is arranged, but an opportunity is offered to pupils to prepare to enter the evening high school, and certificates of admission are given to those who are qualified to begin the work in that school. In addition to the subjects given

above, classes in civil service, sewing, dressmaking, millinery, wood working and mechanical drawing are formed when a sufficient number express an intention to take any one of these courses.

The following table shows the attendance of the evening schools for the year 1903-1904:—

	Number Registered	Average Attendance	Average No. of Teachers*	Average No. of Pupils to a Teacher	Number of Graduates
Mechanical Drawing....	113	73	4	18	15
Free-hand Drawing.....	54	29	2	15	6
High School	362	154	10	16	11
Putnam School.....	572	215	18	12	17
Roberts School.....	535	218	17	13	23
Shepard School.....	144	70	7	10	11
Webster School.....	182	63	6	11	15
Total.....	1,962	822	64	13	98

*The principals and curators are not included in these averages.

The following table shows the cost of the evening schools for the year 1903-1904:—

	Cost of Instruction	Cost of Text-books and Supplies	Cost of Light, Fuel, and Janitor	Total Cost	Cost per Pupil
Mechanical Drawing....	\$911 00	\$43 53	\$185 44	\$1,139 97	\$15 62
Free-hand Drawing.....	432 00	19 39	87 83	539 22	18 58
High School	1,577 50	48 24	878 30	2,504 04	16 26
Putnam School.....	2,127 50	129 55	554 05	2,811 10	13 07
Roberts School.....	1,979 00	125 33	436 74	2,541 07	11 66
Shepard School	870 50	22 03	127 00	1,019 53	14 56
Webster School.....	731 00	15 16	206 19	952 35	15 12
Total.....	\$8,628 50	\$403 23	\$2,475 55	\$11,507 28	\$14 00

The above tables show that the total registration of the evening schools for the term of sixty-three evenings during the year 1903-1904 was one thousand nine hundred sixty-two, an increase of one hundred eleven over that of the preceding year, and the average attendance was eight hundred twenty-two, an increase of ninety-nine.

The total cost of all the evening schools was \$11,507.28, an increase of \$1,311.01 above that of last year, but the cost per pupil was \$14.00, a decrease of \$0.10 per pupil on the average attendance.

The mechanical drawing school occupied four rooms in the Central square building suitable in no respect for the accommodation of the one hundred thirteen men who were registered. Ten less were registered than last year, but the average attendance for the sixty-three evenings was

seventy-three, an increase of four over the preceding year. Fifteen men received diplomas of graduation from the three years' course, — nine from the architectural course, and six from the course in machine drawing.

If this class could be transferred to the drawing room of the Rindge manual training school, better facilities for the work would increase the value of the school to the members and to the city. Many who register soon drop out because of unfavorable conditions, and this year it was necessary to refuse admission to many because of lack of room.

The free-hand drawing school was held in the drawing room of the English high school. The number registered was fifty-four, eleven young men and forty-three young women, ten less than last year. The average attendance was twenty-nine, the same as the preceding year. Two teachers and a curator were employed, and Mr. Roos, the director of drawing, gave much time to this school and in connection with it he gave instruction to a class of teachers of the day schools every Monday evening.

The evening high school occupied ten rooms in the English high school building and employed eleven teachers and a secretary. The number registered was three hundred sixty-two, one hundred eighty-nine young men and one hundred seventy-three young women, a decrease of seventeen from last year. The average attendance was one hundred fifty-four, a decrease of two. Especial interest was noted in the classes in English, stenography and typewriting, bookkeeping and sloyd.

The Putnam elementary school occupied eight rooms and the hall in the Putnam schoolhouse and employed nineteen teachers. The registration was three hundred ten men and boys and two hundred sixty-two women and girls, one hundred thirty-six more than last year. The average attendance was two hundred fifteen, an increase of fifty-seven for the sixty-three evenings. The notable features of this school were large classes in dressmaking, civil service, and of those who were unable to speak the English language. Excellent work was done.

The Roberts school occupied nine rooms and the hall in the Roberts schoolhouse and employed eighteen teachers. Three hundred seventy-eight men and boys and one hundred fifty-seven women and girls were registered, an increase of thirty-four. The average attendance was two hundred eighteen, an increase of twenty-eight. A very interesting feature of this school was the large class of beginners in English. Classes in civil service, dressmaking and sloyd were also taught.

The Shepard school occupied three rooms in the Shepard schoolhouse and employed eight teachers. Eighty-nine men and boys and fifty-five women and girls were registered, an increase of seven. The average attendance was seventy, an increase of seventeen. The branches of the primary and grammar grades were taught.

The Webster school occupied four rooms in the Webster schoolhouse and employed seven teachers. The registration was one hundred fourteen men and boys and sixty-eight women and girls, a decrease of twenty-nine. The average attendance was sixty-three, a decrease of five. Only the usual branches were taught.

The instruction in sewing has been very successful in the two schools in which it has been taught, the Putnam and the Roberts, as was shown by the exhibition of sewing at the English high school building the last evening of the term.

Devoting the last hour of the session of Friday evenings to lectures has proved popular and has added to the interest and attendance of the schools. Some provision for instructive lectures would be a profitable addition to the evening school educational work. Many cities provide such lectures.

Again the committee would call the attention of the Board to the desirability of opening the Rindge manual training school for evening work for boys who have left school and are learning trades in our shops and factories. That this extensive and costly plant should be in operation only six hours a day seems a waste of opportunity. Other cities have established such evening schools and they have proved a great benefit to many who were deprived of such privileges by being compelled to earn their own living early.

The average attendance at the schools during the first week of the term beginning October 10 last was one thousand two hundred forty-one, an increase of one hundred fifty-three over the corresponding week of last year. A class in sewing has been formed in the Shepard school and increased interest in sewing is noticeable in the Putnam and Roberts schools. In addition to instruction in dressmaking, which was so successful last year, instruction in millinery has been introduced in the Putnam school for those who were in the dressmaking classes last year, and it is proving very successful.

VACATION SCHOOLS.

The following is the report of the committee on vacation schools:—

In compliance with an order adopted April 21, the superintendent submitted a report at the meeting of the Board in May of the number of children wishing to attend the vacation schools which was as follows:—

Ninth grade . . .	25	Fourth grade . . .	425
Eighth grade . . .	68	Third grade . . .	641
Seventh grade . . .	131	Second grade . . .	656
Sixth grade . . .	302	First grade . . .	706
Fifth grade . . .	341		
		Total . . .	3,295

Only the grammar grades were provided for. Twelve hundred eighty-nine cards of admission were delivered through the schools and about one hundred were given to pupils who came to the office.

All of the schools began Wednesday, July 6, and continued five weeks. The classes in cooking and sloyd at the English high school building were continued six weeks.

The older pupils were taught sloyd and drawing, cooking, dress-making and basketry. The younger ones, reading, drawing and other studies of an interesting and profitable character.

The following table shows the number that joined these classes and the average attendance in each class:—

Schools	Studies	Number Registered	Average Attendance
Rindge Manual Training School	Sloyd and Drawing.....	104	74.1
English High School	Sloyd and Drawing.....	131	71.4
English High School	Academic	44	24.9
English High School	Basketry	65	38.0
English High School	Cooking	105	63.5
English High School	Dressmaking	58	35.3
Putnam School	Sloyd and Drawing.....	74	52.6
Putnam School	Academic	115	78.1
Putnam School ..	Dressmaking	135	80.1
Roberts School	Sloyd and Drawing.....	75	45.8
Roberts School	Academic	161	98.6
Roberts School	Dressmaking ..	66	35.4
Shepard School	Academic	49	25.7
Shepard School	Dressmaking	55	29.6
Webster School	Academic	37	25.1
Webster School	Dressmaking	35	24.8
		1,309	803.0

The cost of the schools was \$1,836.67 for salaries of teachers, and \$120.76 for supplies. The cost per pupil based on the average attendance was \$2.44

It is recommended that these schools be continued during the next summer vacation and that a suitable appropriation be asked for for this purpose.

TRUANT OFFICERS.

Four officers are employed. The city is divided into four districts, and each officer has assigned to him the schools in one district. Among their duties are the following: to visit each school at least once a day, unless otherwise directed by the agent; to prevent children from loitering about the school premises; to notify the teachers of all cases of con-

tagious and infectious diseases reported by the board of health ; to attend the evening schools when so directed by the agent of the Board to assist in the preservation of order, and to visit places of business where children are employed to see that none are employed unlawfully. They make all complaints for truancy, absenteeism, or school offences at the district court, attend the trials as witnesses, and take boys to the Middlesex county truant school when they are sentenced.

By the rules of the school board the work of the truant officers is done under the supervision of the committee on schoolhouses ; and under the direction of this committee, it is the duty of the agent of the Board to consider all cases of truancy, of persistent violation of the rules of the school, of juvenile vagrancy, of unlawful detention from school, of neglect by parents ; and of any failure on the part of pupils or parents to comply with the rules of the school committee or the public statutes relating to school attendance. It is also the duty of the agent to direct the officers to make complaints ; to certify the records in these cases when presented before the district court ; and to exercise such supervision of the boys who are sent by the court from Cambridge to the truant school as may be allowed under the statutes.

The following is from the report of the committee in charge of the work of the truant officers : —

The four truant officers, Messrs. Cabot, Carmichael, Porter and Riley, have continued to do excellent service as in the past. They have investigated twelve thousand five hundred one cases of absence, seven hundred thirty-nine of which proved to be truancy ; five hundred eighteen, first offence, one hundred seven, second or third offence, and one hundred fourteen, fifth or more offence.

They have entered complaints against thirty boys. Eighteen were sentenced for truancy, five as school offenders, and seven were put on probation by the court. This is eight complaints less than last year.

The parochial schools are coöperating more or less heartily with the officers to prevent the truancy of boys.

The cigarette vice is the worst enemy with which we contend in the matter of truancy. Every boy taken to court bears the stamp of this curse in a greater or less degree. It makes them unreliable at home and at school and saps their physical, mental and moral powers.

At the beginning of the year we had thirty-seven boys in the truant school ; twenty-eight have been discharged and twenty-three sentenced, so that there are thirty-two now at the school from Cambridge.

The city has paid for the board, clothes and schooling of these boys, \$2,184.43, or \$68.26 each for the year, and most of them have been better cared for than would have been possible in the homes from which they

came. Parents, officers, and others who have opportunity to observe, testify that the boys return much improved physically and in general behavior, giving promise of more useful lives.

The school census was taken by the officers and their assistants, and shows that there are seven thousand seven hundred forty-three boys and seven thousand nine hundred thirty-five girls in the city between the ages of five and fifteen years. This is an increase of eighteen boys and one hundred forty-eight girls over last year. The following is the summary of the school census for 1904:—

Number of children in the city between five and fifteen, boys, 7,743; girls, 7,935	15,678
Number in public schools between five and fifteen	12,235
Number in private schools between five and fifteen	3,177
Number not attending school between five and seven	121
Number not attending school between seven and fourteen	34
Number not attending school between fourteen and fifteen	111
Whole number not attending school between five and fifteen	266
Number in the city between five and six	1,615
Number in the city between seven and fourteen, boys, 5,510; girls, 5,599	11,109

It appears from statistics procured by one of the truant officers that there are twelve private schools in Cambridge which contain three hundred thirty-two pupils and receive \$38,090 tuition money, and five parochial schools having three thousand seven hundred fifteen pupils.

CONTAGIOUS DISEASES.

In 1894 the board of health, in accordance with the request of the school committee, appointed a physician, whose duty it is to examine all cases of contagious diseases reported, and to direct the exclusion from the schools of all pupils whose presence will, in his opinion, be a menace to the health of others. He reports his action on every case to the secretary of the school committee. The physician issues all certificates authorizing such children to return to school, as provided by Chapter 44, Section 6, of the Revised Laws.

As a further precaution against contagious diseases, the board of health established, February 26, 1896, a system of medical inspection of children in the schools. The city was divided into six districts, in each of which a physician was appointed to visit the schools in that district. The duties of these physicians as now defined are as follows: to visit the schools subject to their inspection during the morning session of every school day; to examine such children as are indicated to them by the

teachers; to inspect such other children or such parts of the building as they deem necessary for the protection of the pupils, examining at least one school each day; to recommend to the principals to send home immediately any pupil whom they may suspect of having any infectious or contagious disease, and also, in cases of nearsightedness or deafness of pupils, to advise the parents to have the eyes or ears of such pupils examined. On the first of each month, the physicians send a report of their work to the board of health.

The principal of each school is required to read the following at the beginning of each term in all the rooms under his charge:—

“Any teacher or pupil who visits any apartment in which a person has been sick within two weeks, or which has been exposed within that time to contagion of smallpox, varioloid, diphtheria, or scarlet fever, shall not be allowed to attend school until the expiration of two weeks after such visit.”

The agent of the school committee reports that during the year December 1, 1903, to December 1, 1904, the following cases of contagious diseases have been reported by the board of health to the office of the agent, and by the truant officers to the schools:—

Diphtheria	356 cases
Scarlet Fever	1,140 “
Membranous croup	15 “
Measles	493 “

TERMS, HOLIDAYS, AND SCHOOL HOURS.

The school year is divided into three terms,—the autumn, the winter, and the spring term.

The time for beginning the autumn and spring terms, and for closing the winter and spring terms, is fixed annually at the regular meeting of the committee in February. The autumn term ends December 23. The winter term begins on the first school day after that celebrated as New Year's Day.

The holidays are Saturdays Thanksgiving day, with the preceding day and the day following; the twenty-second of February; the nineteenth of April; Memorial day; the seventeenth of June; and in addition to these, for the high schools, Commencement day at Harvard University.

The sessions of the high schools begin at 8.30 A. M., and end at 1.30 P. M. The sessions of the Rindge manual training school begin at 8.30 A. M., and end at 2 P. M. These schools have a recess of half an hour in each session.

With the exception of the Russell school, the morning sessions of the grammar and primary schools begin at 9 and end at 11.45. The afternoon sessions begin at 2 and end at 4, except during the months of November, December, and January, when they begin at 1.30 and end at 3.30. The grammar schools have no outdoor recess. In the primary schools the principal may, at her discretion, substitute an outdoor recess for the period at present devoted to physical training. The sessions at the Russell school begin at 8.30 A. M., and end at 1.30 P. M.

The sessions of the kindergartens are from 9 A. M. to 11.50 A. M.

There are two terms of the evening schools. The first term begins on the second Monday of October, and continues every Monday, Wednesday and Friday evening, until the end of the week before Christmas. The second term begins on the first Monday, Wednesday or Friday evening after the opening of the day schools in January, and continues thirty-five evenings. Vacations and holidays are the same as in the day schools. The sessions begin at 7.30 P. M., and continue until 9.30 P. M.

TEACHERS, APPOINTMENTS, RESIGNATIONS.

There are now four hundred thirty-five teachers in the schools, thirty-six of whom have been appointed during the year. Twenty-four have resigned, two have been given leave of absence for rest or for some special reason, one has died, and one is absent for study or travel under the following rule of the school committee:—

“Any teacher who has served in the city for ten years may, on recommendation of the superintendent and vote of the Board, have leave of absence for one year for purposes of study or travel, and may receive one-third of his salary, provided the amount in no case shall exceed five hundred dollars.”

Since the adoption of this rule in 1896, seventeen teachers have had leave of absence for purposes of study or travel,—seven from the high schools, six from the grammar schools, three from the primary schools, and one from a kindergarten.

Among the teachers who have resigned, there are four who have been connected with the schools for a long series of years. Miss Marianne M. Webb began her work in 1864; Miss Lucy C. Wyeth in 1867; Miss Mary E. Nason in 1870; and Miss Emma A. Hopkins in 1872. All of these teachers rendered efficient and faithful service. Special mention should also be made of the work of Mrs. Alice G. Teele. She taught in the Webster school from 1875 to 1882, rendered important service as a substitute teacher in several schools, and in 1897 was appointed master's assistant in the Russell school. At the meeting of the school committee in April, 1904, she resigned her position to accept the superintendency of the Franklin Square House, Boston, a position for which her remarkable executive ability admirably fits her. Her services in the Russell school, however, were retained a part of each day until the close of the school year.

Among the teachers in service, one has been promoted to be a master in a grammar school, one to be a ninth grade teacher, and one to be the principal of a primary school.

This report is for the year 1904, but a death has occurred so near the beginning of the year 1905, that it seems best to make mention of it in this report. Miss Sarah S. Wells, principal of the Corlett kindergarten, died January 16. She was appointed assistant in the Gore kindergarten in 1894, and was transferred to the Corlett kindergarten as principal in 1897. She was an earnest, faithful teacher, and was highly esteemed by all who knew her.

QUALIFICATION OF TEACHERS.

A person to be eligible to the position of teacher in a kindergarten must have had a course in a high school, a course in a kindergarten normal school, a year's experience in teaching either in a kindergarten or a primary school, and must be able to play the piano; to be eligible to a position in a primary or grammar school, he must have had a course in a high school, a course in a normal school, and a year's experience in teaching; to be eligible to a position in a high school, except in the manual training department of the manual training school, he must be a college graduate. Equivalent preparation may be accepted. Preparation for the work of teaching as shown by years of study, and experience as shown by years of teaching, may be considered in fixing the salaries of teachers at the time of their nomination.

Two months after a teacher has been nominated to a position in a kindergarten or any school below the position of principal or master in a high or a grammar school, two experienced teachers who are not connected with the school in which the nominee is to serve, are designated by the superintendent to examine the teacher so nominated, while at work, and they report in writing to the superintendent; these reports, together with the testimonials and other papers relating to the qualifications and character of the teacher so examined and of all other nominees, are kept on file in the office of the superintendent and are open to inspection by members of the Board only.

The committee on teachers considers all nominations made by the superintendent. This committee confers with the superintendent, considers the reports of the examiners designated by him, makes further inquiry at discretion and reports to the Board.

Any nomination referred to the committee on teachers, unless confirmed, lapses at the expiration of six months, not counting the summer vacation. A person who has failed of confirmation is not to be nominated to a similar position within two years, except on the approval of the committee on teachers.

This committee inquires and reports to the Board in executive session as to the success of any teacher in the employment of the city when so requested by any member of the Board or by the superintendent, and no teacher under such inquiry receives the regular increase of salary, except on the recommendation of this committee.

Under the direction of the superintendent, teachers may visit other schools to observe the discipline and instruction. They may be required to attend teachers' meetings or courses of instruction in methods of teach-

ing for one hour a week. Such meetings may be held on Saturday mornings during term time or at such other time, not in school hours, as the superintendent may direct. Meetings in addition to those indicated above may be held by the superintendent or may be called by him, on request of directors in special subjects.

SALARIES OF TEACHERS AND SCHOOL OFFICERS.

LATIN SCHOOL AND ENGLISH HIGH SCHOOL.

Head Masters	\$3,000 00
Masters	2,000 00
Masters' Assistants	1,200 00
Teachers, first year	700 00
with an annual increase of \$50 until \$950, the maximum, is reached.	
Assistant Teachers, first year	500 00
“ “ second year and each succeeding year	600 00

RINDGE MANUAL TRAINING SCHOOL.

Head Master	\$3,000 00
Master's Assistant	1,300 00
Teachers' salaries range from \$700 to \$1,500.	

WELLINGTON TRAINING SCHOOL.

Master	\$2,500 00
Supervising Teachers (three) first year	900 00
“ “ second year and each succeeding year	1,000 00
Master's Assistant, first year	800 00
“ “ second year and each succeeding year	900 00
Teachers of the eighth grade	700 00
Teachers of the seventh grade (one year's experience)	450 00
Teachers of the other grades	250 00

GRAMMAR AND PRIMARY SCHOOLS AND KINDERGARTENS.

Masters of grammar schools	\$2,000 00
Submasters, first year	1,000 00
with an annual increase of \$100 until \$1,400, the maximum, is reached.	
Masters' Assistants, first year	800 00
“ “ second year and each succeeding year	900 00
Teachers of the ninth grade, first year	750 00
“ “ “ second year and each succeeding year	800 00
Special Teachers in grammar schools, first year	700 00
“ “ “ “ second year and each succeeding year	750 00
Principals of primary schools, first year	700 00
“ “ “ “ second year and each succeeding year	750 00
with five dollars additional for each room under her supervision.	
Teachers of grammar and primary schools and of kindergartens, first year	450 00
with an annual increase of \$50 until \$700 is reached.	

Assistant teachers, that is, teachers not in charge of a room, are paid \$450 the first year, \$500 the second, and \$550 the third and each succeeding year; and, in the case of assistants in the kindergartens, \$600 for the fourth and each succeeding year.

SUBSTITUTES.

The pay of a substitute teacher in a high school, who is employed temporarily, is \$2.50 a day; if employed one month or more, it is at the rate of \$500, \$600 or \$700 a year, the sum to be determined by the superintendent, who shall consider the experience of the teacher and the position to be filled, in fixing the sum.

The pay of a teacher who is employed temporarily as a substitute in a grammar school, a primary school, or a kindergarten, is \$1.00 a session; if employed one month or more, it is at the rate of \$450 a year.

SPECIAL TEACHERS AND OFFICERS.

Director of Music	\$2,000 00
Assistant Teacher in Music	850 00
Director of Drawing	2,000 00
Assistant Teacher in Drawing	800 00
Director of Nature Study (three-fifths time)	1,000 00
Director of Physical Training	950 00
Instructor of Physical Training in the High Schools	800 00
Director of Sewing	700 00
Teachers of Sewing	600 00
Superintendent of Schools	3,500 00
Supervisor of Primary Schools	1,300 00
Agent of the Board	2,100 00
Truant Officers (four are employed)	1,000 00
Secretary of the School Committee	400 00
Page of the School Committee	25 00
Secretary and Librarian of the Latin School	600 00
Secretary and Librarian of the English High School	600 00
Secretary and Librarian of the Rindge Manual Training School	600 00

EVENING SCHOOLS.

Principal of Mechanical Drawing School, per evening	\$4 00
Principal of High School " "	4 00
Principal of Elementary Schools " "	3 00
Teachers in Drawing Schools " "	3 00
Teachers in High School " "	2 00
Teachers in Elementary Schools " "	1 50

ENGLISH HIGH AND NORMAL SCHOOL.

In December the number of pupils in the Latin school was five hundred forty-eight, two hundred forty-four boys, three hundred four girls; in the English high school there were five hundred sixty-nine pupils, eighty-nine boys, four hundred eighty girls, and in the Rindge manual training school there were four hundred eleven boys.

It appears that the English high school is now largely a girls' school. In connection with it, would it not be wise to establish a normal training department in which the course of study should be extended two years and be equivalent to that in our State normal schools? This would meet the requirements for admission to the Wellington training school and enable our Cambridge girls to obtain here in Cambridge a thorough preparation for the work of teaching.

The English high school has every facility for this work. It has a chemical department, a department of physics, a commercial department, a domestic science department, and a department in sloyd. The instruction in music and physical training could be extended to cover the instruction given in normal schools, and the director of drawing and the director of nature study could give the instruction in their respective departments.

In addition to this there is no doubt that arrangements could be made with Harvard University by which these pupils could attend one or more courses in the pedagogical department there. The head master of the English high school has special preparation for this work, and there is no question as to the qualifications of the other teachers for the several departments of instruction. The superintendent commends this part of his report to the high school committee.

AN UNGRADED SCHOOL.

Truants and habitual school offenders can be sent to a truant school. Truant boys are not necessarily bad boys, and boys known as habitual school offenders under changed circumstances become responsive to new influences. Years ago before the appointment of truant officers there was a boy in the Putnam school who was frequently a truant, and this had been the case for two years under two different teachers. He came under the charge of a third teacher. It was the practice of this teacher to endeavor to awaken the interest of her pupils in some things outside of the routine work of the school. One day the mother of this boy came to enquire when the next special talk of the teacher would be given, adding that she wished her son to go on an errand which would take him out of

school for a half day and that he was unwilling to be absent on the occasion of one of these special talks. The truant boy had become interested in his work.

A boy in a neighboring town was brought by the superintendent of schools to a teacher who afterwards taught in Cambridge. The superintendent said: "I have brought this boy to you, although he does not belong in your district, for unless you can manage him he must go to the truant school." The teacher received the boy in the right spirit and arranged for his work. A few days later she noticed that something was attracting the attention of the pupils sitting near this boy. She went to his desk and found that he had a bottle containing two or three tadpoles. She reached her hand for the bottle (the boy scowled) and as he gave it to her she said: "I will put it on my desk, and when school is done you can come and get it." At the close of school the boy came for his bottle. The teacher had a pleasant talk with him, and found that he was interested in *things*. "I have a book at home," she said, "that will tell you about many of the things in which you seem to be interested. I will bring it tomorrow." The boy did not go to the truant school.

These are special cases, but connected with the schools all over the city there are boys who are truants from time to time; there are boys who take little or no interest in their work. Nor is it strange that this is so. Many of these boys have no helpful influences at home, in fact, they have no home worthy of the name.

During the past thirty years the question of an ungraded class has several times been under consideration. Five years ago the experiment was tried with a good degree of success in what was then the Allston school, a new school occupying all but one room in the old Allston building. This school increased in numbers rapidly and soon required the whole building for its own use, and the ungraded class was given up.

The superintendent believes that circumstances are now favorable to the establishment of an ungraded class. The Merrill school building and yard afford almost ideal conditions for this purpose. The building contains two unoccupied schoolrooms, an assembly hall, and a room well adapted to sloyd purposes, and it has the largest yard in the city.

It may be said at first that it will not be wise to bring together pupils of an ungraded class and those of a primary school and kindergarten, and this would be true were it the intention to retain in the school for any length of time any pupil who did not respond to its special influences. The large yard could be divided into garden lots and assigned to the care of the different classes. The sloyd room, and the things made there, would be of constant interest to the older pupils, and in many ways the assembly hall could be used to make school life more attractive and profitable.

It costs the city about sixty dollars a year for every Cambridge boy sent to the truant school at North Chelmsford. At the present time there are thirty-two boys from Cambridge connected with this school. If the boys when sentenced were put on probation and sent to the Merrill school, as no doubt the judge would gladly permit, is there any doubt that more than half of them would become interested in their work and not need the special discipline of the truant school. A thousand dollars saved from the expenditure for truants would go far towards meeting the added cost of the Merrill school; but it is not the question of dollars and cents that should be considered, it is the question of saving boys for useful lives.

Is it not wise that this experiment should be tried under these favorable circumstances for success?

RESIGNATION OF THE SUPERINTENDENT OF SCHOOLS.

It seems desirable that the facts relating to the resignation of the superintendent of schools should have permanent record in this report. At the meeting of the school committee April 21, 1904, the following communication from the superintendent was received : —

To the School Committee of Cambridge :

At the meeting of the school committee on the fourth of April, 1854, I was elected temporary teacher of the Putnam grammar school in place of Mr. Lassell who was absent on account of ill health. Mr. Lassell did not regain his health, and at the annual election of teachers on the ninth of August of the same year, I was chosen to fill the vacancy caused by his resignation.

For more than twenty years I served the city as principal of that school. On the third of September, 1874, I was elected to the position which I now hold. I am, therefore, on my thirtieth year of service as superintendent of schools, and have already completed fifty years of service in the schools of this city.

For the past few years I have looked forward to the completion of this school year as the time when my connection with the schools should end. I make this announcement at this early date that the committee may have ample time to consider the qualifications of candidates for this important and desirable position ; and I congratulate my successor in advance, for Cambridge is a city in which teachers superintendent and all connected with the schools are treated with the utmost kindness and consideration by the school committee.

I also take this opportunity to acknowledge the uniform courtesy shown me by the several superintendents of public buildings with whom I have come into close relations.

Respectfully,

FRANCIS COGSWELL,

Superintendent of Schools.

This communication was referred to a special committee of which the president of the Board was the chairman.

Under date of April 29 this committee, through its chairman, sent to the superintendent the following letter : —

Mr. Francis Cogswell, Superintendent of Schools, Cambridge.

DEAR MR. COGSWELL, — In accordance with the following vote, "that the chairman be a sub-committee to convey to Mr. Cogswell the expression of the opinion of this committee that it will be for the best

interests of the city that he continue to serve as superintendent of schools for the ensuing year and to urge that he consent to a re-election," which was unanimously adopted, it gives me great pleasure on behalf of the special committee to request most urgently that you reconsider the decision expressed in your letter of April 21, and that you will consent to continue, as superintendent, to care for the interests of the public schools of Cambridge and give them the benefit of the wisdom and experience gained during your long and useful service.

Hoping for a favorable reply, I am,

Yours truly,

WILLIAM TAGGARD PIPER,
President of the School Committee.

In reply to this letter the superintendent under date of May 9, wrote substantially as follows, a part of the letter being omitted:—

Mr. William Taggard Piper, President of the School Committee.

DEAR MR. PIPER,— Your letter informing me of the action of the committee appointed to consider my communication to the school board in regard to my withdrawal from the position I now hold, has received most thoughtful consideration. In reply, let me say in the first place that it is a great satisfaction to me to be assured "that in the opinion of your committee it would be for the best interests of the city for me to continue to serve as superintendent of schools for the ensuing year."

The communication I sent to the Board at the April meeting was written after the most deliberate consideration. In fact the last school report was prepared with special reference to its being my final report.

I appreciate the action of your committee, but I cannot help feeling that it is the appropriate time for me to end my connection with the schools. Your committee thinks otherwise and should its action be approved by the full Board, I shall be willing to continue my work for the present year as superintendent.

Respectfully yours,

FRANCIS COGSWELL,
Superintendent of Schools.

At the meeting of the Board in June the superintendent was re-elected. In accepting the position he presented the following letter which was read and placed on file:—

To the School Committee of Cambridge:

At the April meeting of the Board I made known my purpose of ending my connection with the schools as superintendent at the close of the present school year.

At the request of the committee appointed to consider this communication I reconsidered my decision and consented to serve another year should it be the wish of the school committee. I think it important, however, that it should be distinctly understood that I shall not again be a candidate for re-election.

Thanking the committee for this renewed expression of confidence, I am,

Respectfully yours,

FRANCIS COGSWELL,
Superintendent of Schools.

FIFTIETH ANNIVERSARY.

TWENTY YEARS AS TEACHER . . THIRTY YEARS AS SUPERINTENDENT.

It has been the custom in Cambridge to recognize long service in any department of the city's work. During the past year a banquet was given to Chief Casey of the fire department who had completed fifty years of efficient service and his portrait has been placed in the city hall.

In accordance with this custom the superintendent of schools was given a reception at the close of fifty years of service in the schools of Cambridge. The reception was held in the Latin school hall on the evening of June 27.

The superintendent desires to express his great satisfaction at the arrangements on that occasion, and his appreciation of what was done and said in recognition of his work.

His portrait hangs in the city hall, a picture with which his name is connected although not his gift has been placed in each school building, and in his home there stands a clock whose sweet chimes so long as life lasts will awaken pleasant memories and will bring to mind the many friends who have enriched his life by their kindly acts and words.

In closing this report the superintendent has but one wish to express in regard to the schools — may they prosper in the future even more than in the past!

Respectfully submitted,

FRANCIS COGSWELL,
Superintendent of Public Schools.

REPORT OF THE SPECIAL COMMITTEE FOR THE
COGSWELL TESTIMONIAL.

At a meeting of the school committee, held May 10, a special committee was appointed to "arrange for a suitable recognition of the long continued and very valuable services to the public schools of Cambridge rendered by Francis Cogswell who has been superintendent of schools for the last thirty years and has now completed fifty years in educational work in Cambridge." A number of other friends of Mr. Cogswell who had a high appreciation of his services were added to this committee and through their efforts more than fourteen hundred dollars was raised, the teachers in the public schools of Cambridge being among the contributors.

The money was used for a portrait of Mr. Cogswell to be given to the city, for a large carbon photograph, purchased at Mr. Cogswell's suggestion, to be given to each public school, and a hall clock with the following inscription:—

"To Francis Cogswell
Superintendent of Schools
From the Cambridge Teachers
And Other Friends and Neighbors
Through a Committee of His Fellow Citizens
27 June 1904."

On the evening of June 27 a reception was held in the Latin school hall when General Bancroft, on behalf of the committee, presented the gifts to the city and to the schools and they were accepted by the Mayor; President Eliot of Harvard University presented the clock and Mr. Cogswell made a short reply.

It seems proper that a brief report of this mark of the respect and appreciation of his townsmen and fellow workers should be placed on the records of the school committee, and in this connection the committee wishes to quote a minute adopted by the school board June 21, 1900:—

"The members of the school committee, on the completion of the twenty-fifth year of continuous service as superintendent of schools, by Francis Cogswell, tender him their congratulations on this quarter century of loyal, progressive and successful conduct of his office, and wish him many years of further activity. They desire to put on record their appreciation of the earnestness and success of his work, of the progress which the schools have made under his leadership, of the tact and firmness with which he has conducted his manifold duties, and of the good will which he has uniformly won from the teaching staff.

As citizens of Cambridge as well as members of the school committee, they are glad to express publicly their gratitude to him for the service he has rendered to the school system of the city."

AUGUSTINE J. DALY,
WILLIAM TAGGARD PIPER,
SHERMAN RUSSELL LANCASTER,
SETH N. GAGE,
CHARLES H. THURSTON,
J. HENRY RUSSELL,
Special Committee.

The following is a list of the pictures purchased by the committee, and the names of the schools in which they have been placed:—

Notre Dame Cathedral, Paris		Latin School
The Sistine Madonna	<i>Raphael</i>	English High School
St. Peter's, Rome		Rindge Manual Training School
The Fighting Téméraire	<i>Turner</i>	Rindge Manual Training School
Anne Hathaway's Cottage, England		Agassiz School
Shoeing the Bay Mare	<i>Landseer</i>	Boardman School
Baby Stuart	<i>Van Dyck</i>	Boardman Kindergarten
A Distinguished Member of the Humane Society	<i>Landseer</i>	Corlett Kindergarten
Modern Egypt		Cushing School
The Sistine Madonna	<i>Raphael</i>	Ellis School
Sheep. Spring	<i>Mauve</i>	Felton School
The Roman Forum		Fletcher School
Ploughing	<i>Rosa Bonheur</i>	Gannett School
Madonna del Granduca	<i>Raphael</i>	Gannett Kindergarten
The Angelus	<i>Millet</i>	Gore School
Dignity and Impudence	<i>Landseer</i>	Gore Kindergarten
The Holy Night	<i>Correggio</i>	Harvard School
Dignity and Impudence	<i>Landseer</i>	Holmes School
Abraham Lincoln	<i>St. Gaudens</i>	Houghton School
Automedon with the Horses of Achilles	<i>Regnault</i>	Kelley School
Valley of the Toucques	<i>Van Marcke</i>	Lassell School
The Bridge at Concord		Lowell School
The Angelus	<i>Millet</i>	Merrill School
Sir Galahad	<i>Watts</i>	Morse School
The Aurora	<i>Guido Reni</i>	Otis School
The Gleaners	<i>Millet</i>	Parker School
The Madonna of the Chair	<i>Raphael</i>	Peabody School
The Capitol at Washington		Putnam School
Dignity and Impudence	<i>Landseer</i>	Reed School
The Return to the Farm	<i>Troyon</i>	Riverside School
Avenue of Trees, Middelharnis	<i>Hobbema</i>	Roberts School
The Holy Family	<i>Murillo</i>	Russell School
Canterbury Cathedral		Shepard School

The Capitol at Washington	.	.	.	.	.	.	.	Sleeper School
The Gleaners	.	.	.	.	<i>Millet</i>	.	.	Tarbell School
The Horse Fair	.	.	.	.	<i>Rosa Bonheur</i>	.	.	Taylor School
By the Riverside	.	.	.	.	<i>Lerolle</i>	.	.	Thorndike School
Arch of Constantine	.	.	.	.	.	.	.	Washington School
The Poets' Corner, Westminster Abbey	.	.	.	.	.	.	.	Webster School
Niagara Falls	.	.	.	.	.	.	.	Wellington School
Cathedral at Amiens	.	.	.	.	.	.	.	Willard School
The Melon Eaters	.	.	.	.	<i>Murillo</i>	.	.	Wyman School

IN SCHOOL COMMITTEE, February 16, 1905.

Ordered, That the report of the superintendent as read and outlined by him be accepted and adopted as the annual report of the school committee for 1904, and that the secretary be authorized to append the names of the members of the committee thereto.

SANFORD B. HUBBARD,
Secretary.

Members of the School Committee for 1904

AUGUSTINE J. DALY, *Chairman ex officio.*

WARREN P. ADAMS.	MARY E. MITCHELL.
GEORGE W. BICKNELL.	WILLIAM TAGGARD PIPER.
CAROLYN P. CHASE.	J. HENRY RUSSELL.
* SETH N. GAGE.	ARTHUR P. STONE.
EDWARD J. KRONAN.	CHARLES H. THURSTON.
SHERMAN R. LANCASTER.	ROBERT WALKER.
JAMES A. LEW.	† JAMES FRANK WENTWORTH.
	‡ CHARLES H. WILLIAMS.

* Resigned Oct. 20, 1904.

† Died April 12, 1904.

‡ Resigned Sept. 15, 1904.

SELECTIONS FROM THE REPORTS OF THE MOSELY EDUCATIONAL COMMISSION TO THE UNITED STATES,
OCTOBER-DECEMBER, 1903.

PAGE 38.

A teacher's business is not to teach so many rules of arithmetic, or so many facts of history, but to build character, to develop mental power, and to this end it is possible, while teaching less, to accomplish more.

PAGE 39.

Education cannot be regarded as successful unless it creates the appetite for knowledge, and if a child leaves school with the thirst for knowledge strong within him he carries with him not only the key to success in after life, but the most priceless gift that a teacher can impart.

PAGE 101.

The efficiency of American schools is due primarily to the professional skill of the teachers. Programmes of study, no matter how well drawn, will never raise education to a high standard unless the teacher is trained for his duties; even an indifferent programme will become effective in the hands of a teacher who is an expert in the arts of his profession. This the American educational authorities realise thoroughly.

PAGE 104.

If I were asked whether the industrial greatness of America is to be attributed primarily to her educational methods I would answer in the negative. America's industry is what it is primarily because of the boundless energy, the restless enterprise, and the capacity for strenuous work with which her people are endowed; and because these powers are stimulated to action by the marvellous opportunities for wealth-production which the country offers. These conditions have determined the character of all American institutions—the schools included. The schools have not made the people what they are, but the people, being what they are, have made the schools.

PAGE 107.

• Educational legislation is a matter for each State and is not determined by the national Senate and Congress at Washington. Upon the local community lies the responsibility of educating its own people. The

result of this is that educational institutions, whether elementary or higher, must be in close touch with the aims and ambitions of the community that they serve, or they cannot be allowed to continue to exist. That this condition is in the long run beneficial in an equal degree to the teachers, to the people, and consequently to the institutions, I have no manner of doubt.

PAGE 237.

In many ways the United States has exceptional opportunities for leading the way in new methods of education, and it cannot be denied that the nation is availing itself of its unique advantages. One thing, however, must be borne in mind, and that is that, like our own country, she is still in a stage of transition so far as her educational aims and machinery are concerned. She does not claim to have reached finality in her efforts to educate, or to have perfected any one system. She is just feeling her way towards a new and better method of instruction. But more than we or any European nation have yet done, she has entered upon many novel and interesting experiments which are gradually revolutionising her teaching. More than we, she takes account of the changed conditions in which men live to-day, and seeks to adapt her training to the current need. And more than we, she is thus attempting to solve the new educational problems that are confronting civilised nations.

PAGE 249.

Education in the United States, whatever be the local difference of administration, rests upon the principle that every citizen, male or female, irrespective of class, creed, or fortune, is entitled to equal opportunities, and that it is the business of the State to provide those opportunities by education fitting men and women for life.

PAGE 250.

The teaching in American high schools, as well as their discipline, struck me as more informal and leisurely than in our own. I doubt if they get through as much work as our schools do; nor do I think that a lad of eighteen, in the first class of an American high school, can compare in the extent of his reading or the scholarly finish of his work with boys from the head of Eton, Rugby, or Marlborough. But our great secondary schools cater for a select few, theirs for the whole people. They give an equal chance of a sound education to every boy or girl, irrespective of class, creed, or means; and on the whole they are successful. We claim to provide, not always with success, a superior article for those who can afford to pay for it. They provide fairly well for the intellectual needs

of the average citizen, but, perhaps, hardly enough for the training of special ability. We give a good education — better, I think, than theirs — to the few who can profit by it, but more or less neglect the mass of ordinary minds.

PAGE 255.

What has struck me most forcibly in a short and imperfect survey of a wide field is first of all the attitude of the American people towards public education as a prime necessity of national life, for which hardly any expenditure can be too great; and next, its eminently practical and popular character.

PAGE 257.

The Americans believe in education, and it would hardly be an exaggeration to say that in most parts of the country there is no other question about which they feel so strongly or on the furtherance of which they are so resolutely set.

PAGE 259.

Everywhere I was most favourably impressed with the work of the training schools I visited, and as far as I could judge, the general excellence of the teaching in American schools is largely due to the thorough training most of the teachers have received. In the majority of the States, I was struck with the cultivation and refinement of the teachers, their enthusiasm for the profession, and readiness to better equip themselves for their work by private study, by attending classes throughout the year and summer courses at the universities during the vacation.

PAGE 335.

One cause of the keenness for education in America is the freedom of opportunity which awaits all American citizens who have the ability to rise and are willing to pay the price in industry and training. Every youth, be he the son of the President or the son of the labourer, knows that there is nothing to hinder his advancement to the highest positions in public, professional, or commercial life, except his own personal merit and ability. To attain to these qualities he believes an advanced education is essential, and he is willing, therefore, to do anything to obtain it.

PAGE 378.

The great interest which the people generally take in educational affairs is shown by the manner in which personal assistance is so often rendered to the public schools. In large numbers of instances one is told that many of the pictures, statuettes, and pieces of furniture, etc., have

been given by someone who is interested in the school. Children often give concerts, for which a small charge is made, and the proceeds used for the purchase of some article of school furniture, or apparatus, or of books for the school library.

PAGE 379.

I am profoundly convinced of the fact that what has contributed perhaps more than anything else to make the American people so successful industrially and commercially is the intensely democratic character of their educational system. The next most important factor is the eminently practical and useful character of the instruction which is given in all their educational institutions. The American ideal is to produce the most capable citizen, the person who can "do things," rather than the cultured gentleman of leisure.

PAGE 380.

The high schools are interesting, both from an economic and a sociological point of view. Only about twelve per cent of all the scholars enrolled in them are preparing for college; all the rest leave school either before completing the school course, or immediately after the secondary school course is finished. Many enter a training college (normal school) in order to prepare for the teaching profession, whilst the others begin active life in some business or other employment. One can trace the influence of the high school training in the manners and capacity of all the young people to be seen at work in the business places and factories in the United States. The actual results of the high school course, great as they are, are not such important factors in a social sense as are the habits of study which have been acquired during the most important period of physical and mental development.

PAGE 113.

Another characteristic of the high school in America is co-education. Boys and girls go through the same curriculum, are taught by the same teachers, and sit side by side in the same class rooms throughout their school careers in nearly all the public high schools. The advantages and disadvantages of this arrangement seem to have been fully discussed and anxiously considered. It is a matter upon which it is practically impossible for the occasional visitor to come to any conclusion that is worth having. I think, however, that one general observation which I believe was made by many of the Commissioners is worth recording, namely, that the relations of boys and girls in and out of school, of men and women students in the universities, as well as of men and women in the everyday

walks of life, appeared to be more natural than in this country. There seemed, for example, to be no difficulty in business houses or in the administrative offices of colleges and universities in having mixed staffs, men and women working side by side without any of the hindrances to work that are heard of over here. That the testimony of the business men on this point was unanimous is shown by the fact that they regarded any question with regard to it with surprise.

PAGE 169.

Any survey of American secondary education would be incomplete without a reference to the manual training, which forms an integral part of the systems in the majority of secondary schools in the United States. The connection between mind and hand is recognised there to an extent which preconceived prejudices have hitherto rendered impossible in England. But instead of manual training being confined to those who are to pursue an industrial or engineering career, or to those who are relegated to "shops" merely as a *derniere ressource*, because they are incapable of the abstractions of book learning, in the United States it is regarded in many of the best developed schools as *an integral part of a liberal education*. Its importance in this aspect varies indeed in different States, and in different cities, but everywhere it occupies an honourable place. It is, moreover, graded on carefully thought out systems from the cardboard "modelling" of the kindergarten to the skilled engineering processes in the colleges and universities. Though space forbids me to enlarge on the value of this feature of American education, my report would lack a completeness satisfactory to myself if I did not pause to emphasise my profound sense of the value of manual training as scientifically carried out in the schools of the United States, leading as it does to the happiest results promoting that versatility and alertness which is so characteristic of American workers. It is almost impossible to exaggerate it.

PAGE 206.

It is claimed for truly educational handwork that it develops the physical, mental, and moral qualities. It is not so much a subject of instruction as of method. It calls out creative power, and the processes which are passed through, from the conception of a model in the mind to its first being embodied in a working drawing, then to its assuming permanent form in clay or wood, are each healthful, real educational developments of will power, accompanied by that keen sense of pleasure which comes from the act of construction. Manual training also develops individuality; handwork cannot be slurred over in chorus; it must really be

done, each piece and process, under the teacher's eye. We cannot do good handwork without sticking to honesty and truth; we cannot, in manual training, hide or equivocate, or slide over. The good work we do is there, plain for all to see; the faults we have made stand out self-revealed, no outside judgment needs to be called in, and we stand by our own work, justified or condemned. Another most valuable result achieved by educational handwork is, that it not infrequently infuses new life into a child who is dull and who seems to be absolutely irresponsive to the usual educational stimulus of books. Brought into contact with manual work, an aptitude for it is often discovered, the child feels that he is no longer a hopeless dullard, the butt of the class, and the despair of the teacher. He stands henceforth on another plane, and on an equality with his fellows, for if they can beat him with their heads, he can equal or beat them with his hands. To develop in him this self-respect is a gain of inestimable value. In this way a boy's interest is frequently caught and held, his general education is advanced, and he is retained longer in the school.

PAGE 237.

In Britain, owing partly to class and caste distinctions which do not hold to the same extent across the Atlantic, the impression has got abroad that education only spoils the common workman and unfits him for his industrial position. Manufacturers and managers generally seem to look with disfavour upon highly educated youths and college men. At least, they give no preference or encouragement to this class over their more ignorant rivals, and consequently, the youths themselves, finding no advantage in remaining long at school or college, leave early, ignoring the benefits of a knowledge and training which seem to carry them no further forward in the actual business and trade of life.

The attitude in the States I found to be exactly the opposite of this. So far from disparaging education, the American regards it as the chief national asset, and strains every nerve to render it as widely diffused as possible, convinced that the increase of intelligence thus fostered will be a common gain. The educated youth will not only make a better citizen, but he will outstrip his more ignorant fellow in industrial efficiency, and in the long run leave him far behind. The conditions of American life have not permitted her people to ignore so obvious a fact. There are circumstances and forces, as I have indicated, which have thrust upon them more peremptorily than upon us, recognition of the value and necessity of education. Besides the economic fact that the development of the material resources of the country demands the best available intelligence and skill, there are the social and political factors. The nation is a democracy very

pronounced in its views of personal rights and personal liberty, and if it is to govern itself wisely, it must make sure, as far as possible, that its members drawn as they are from all nationalities, are sufficiently welded together and enlightened to make intelligent and safe use of their voting privileges. Widespread popular ignorance would be a constant menace and danger to the stability of the State, as well as to the industrial interests.

In consequence of this more enlightened view of education, manufacturers and employers of labour are more ready to recognise the superiority of the trained student over the untrained artisan, and are everywhere eager to get technically-trained men to direct their work; they show their interest in, and appreciation of, learning by founding and equipping institutes and colleges for the technical training of young men in the various industries; and they further encourage all such institutions by giving the college-trained youths a preference over those who are merely shop-trained.

PAGE 309.

The attitude of the most thoughtful Americans is perhaps best summed up in the pregnant phrase of President Roosevelt — "Education will not save a nation, but no nation can be saved without education."

BOOKS OF INTEREST TO TEACHERS.

The following list of books has been prepared by the librarian of the Cambridge Public Library, Clarence W. Ayer, for use by the teachers of the public schools. It is based on that printed in the school report for 1901, but it excludes books written expressly for young people. It is arranged to bring out special topics of teaching, and to include some of the representative aids to teachers in all subjects. Teachers are welcome to consult the books on the shelves in the stack.

EDUCATION, GENERAL.

Ascham. The scholemaster. 1884	370-As23
Baker. Education and life. 1900	370.4-B17
Boone. Science of education. 1904	370-B64
Briggs. Routine and ideals. 1904	370.4-B761
——— School, college, and character. 1901	370.4-B76
Butler. The meaning of education. 1898	370.4-B97
Butler, <i>ed.</i> Education in the United States. 2 v. 1900	370.4-B972
Comenius. The great didactic. 1896	370-C73
——— Orbis pictus. 1887	370-C731
Currie. Principles and practice of common school education. 188-	370-C93
Davidson. Rousseau and education according to nature. 1898	370-D28
De Garmo. Interest and education. 1902	370-D36
Dewey. The school and society. 1899	370.4-D51
Dutton. Social phases of education in the school and the home. 1899	370.4-D95
Eliot. Educational reform. 1898	370.4-EL4
Felkin. Introduction to Herbart's science and practice of educa-	
tion. 1895	370.1-F33
Fitch. Educational aims and methods. 1900	370.4-F55
Fletcher, <i>ed.</i> Sonnenschein's cyclopædia of education. 1889	370.3-F63
Hanus. Educational aims and educational values. 1899	370.4-H19
——— A modern school. 1904	370.4-H191
Hart. Studies in American education. 1895	370.4-H25
Henderson. Education and the larger life. 1902	370.4-H38
Herbart. Outlines of educational doctrine. 1901	370-H41
Horne. Philosophy of education. 1904	370.1-H78
Huxley. Science and education. 1894	370.4-H98
Kay. Education and educators. 1883	370-K18
Kiddle and Schem, <i>eds.</i> Cyclopædia of education. 1877	370.3-K53
——— Dictionary of education and instruction.	
Based upon the <i>Cyclopædia of education</i> . 1881	370.3-K532
Locke. Some thoughts concerning education. 1880	370-L79
Lyttelton, and others. Thirteen essays on education. 1891	370.4-L99
McMurry. Elements of general method, based on the principles of	
Herbart. 1903	370.1-M22
Mann. [Life and works of Horace Mann. Ed. by Mrs. Mann.] 5 v.	
1891	370.8-M313
Moncrieff. A book about dominies. 1869	370.4-M74
Montaigne. Education of children. 1899	370-M76
Mullany. Essays educational. By Brother Azarias. 1896	370.4-M91
Page. The rebuilding of old commonwealths. [Southern states.]	
1902	370.4-P14

Payne. Contributions to the science of education. 1886 . . .	370.4-P291
——— Lectures on the science and art of education. 1884 . . .	370.4-P29
Peaslee. Thoughts and experiences in and out of school. 1900 . .	370.4-P32
Rosenkranz. Philosophy of education. 1893	370.1-R72
Rousseau. Emile; or, concerning education. Tr. by Eleanor Worthington. 1888	370-R7652
——— Emile; or, treatise on education. Tr. by W. H. Payne. 1893	370-R7651
Schwickerath. Jesuit education. 1903	370-Sch98
Spalding. Education and the higher life. 1890	370.4-Sp16
——— Means and ends of education. 1901	370.4-Sp163
——— Opportunity, and other essays and addresses. 1900 . .	370.4-Sp162
——— Thoughts and theories of life and education. 1901 . .	370.4-Sp164
Spencer. Education, intellectual, moral, and physical. 1898 . .	370-Sp3
Tarver. Debateable claims: essays on secondary education. 1898 .	370.4-T17
——— Some observations of a foster parent. 1899	370.4-T171
Tate. Philosophy of education. 1885	370.1-T18
Walker. Discussions in education. 1899	370.4-W15

HISTORY OF EDUCATION.

Balfour. Educational systems of Great Britain and Ireland. 1898	370.9-B19
Boone. Education in the United States. 1889	370.9-B64
Compayré. History of pedagogy. 1888	370.9-C73
Cubberley. Syllabus of lectures on the history of education, with selected bibliographies. 2 v. 1902	370.9-C89
Davidson. Aristotle and ancient educational ideals. 1892 . . .	370.9-D28
——— Education of the Greek people, and its influence on civilization. 1894	370.9-D281
Dexter. History of education in the United States. 1904 . . .	370.9-D52
Hailman. Twelve lectures on the history of pedagogy. 1874 . .	370.9-H12
Kemp. History of education. 1901	370.9-K32
Laurie. Historical survey of pre-Christian education. 1895 . . .	370.9-L37
——— Studies in the history of educational opinion from the renaissance. 1903	370.9-L371
Monroe. Source book of the history of education for the Greek and Roman period. 1901	370.9-M75
Munroe. The educational ideal. 1895	370.9-M92
Painter. History of education. 1893	370.9-P16
Quick. Essays on educational reformers. 1890	370.9-Q4
West. Alcuin and the rise of the Christian schools. 1892 . . .	370.9-W52
Woodward. Vittorino da Feltrè and other humanist educators. 1897	370.9-W87

TEACHING AND METHODS.

Abbott. The teacher. 1884	371-Ab2
Barnett. Common sense in education and teaching. 1899 . . .	371-B261
Barnett, ed. Teaching and organisation. 1897	371-B26
Beale, and others. Work and play in girls' schools. 1898 . . .	371-B36
Blakiston. The teacher: hints on school management. 1879 . .	371-B58
Brooks. Normal methods of teaching. 1887	371.3-B79
Compayré. Lectures on pedagogy. 1890	371-C73
De Garmo. The essentials of method. 1899	371.3-D36
——— Herbart and the Herbartians. 1896	371.4-D36
Dodd. Introduction to the Herbartian principles of teaching. 1898	371.4-D66

Fitch. Lectures on teaching. 1887	371-F55
Froebel. The education of man. 1892	371.4-F92
Herbart. A B C of sense-perception, and minor pedagogical works. 1896	371.4-H41
Hill. Seven lamps for the teacher's way. 1904	371-H55
Hinsdale. Art of study. 1900	371.3-H59
Hughes. Froebel's educational laws for all teachers. 1898 . .	371.4-H87
—— Mistakes in teaching. 1889	371-H87
Johonnot. Principles and practice of teaching. 1891	371-J66
Kiddle, <i>and others</i> . How to teach. 1877	371.3-K53
Landon. Principles and practice of teaching and class manage- ment. 1894	371-L23
—— School management. 1903	371-L231
McMurry and Morton. Method of the recitation. 1903	371.3-M229
Page. Theory and practice of teaching. 1885	371-P14
Parker. Notes of talks on teaching. 1891	371-P221
Patrick. Elements of pedagogics. 1895	371-P27
Pestalozzi. How Gertrude teaches her children. 1894	371.4-P43
—— Leonard and Gertrude. 1885	P437L
Pinloche. Pestalozzi and the foundation of the modern elementary school. 1901	371.4-P65
Prince. Courses and methods. 1886	371.3-P93
Putnam. Manual of pedagogics. 1895	371-P98
Rosenkranz. Pedagogics as a system. 1872	371-R72
Salmon. Art of teaching. 1898	371-Sa3
Schæffer. Thinking and learning to think. 1901	371-Sch1
Search. An ideal school. 1901	371-Se1
Swett. Methods of teaching. 1880	371-Sw4
Thring. Theory and practice of teaching. 1883	371-T41
Tompkins. Philosophy of school management. 1895	371-T59
White. Elements of pedagogy. 1886	371-W58
—— School management. 1893	371.5-W58
Wilson. Pedagogues and parents. 1904	370.4-W69
Wyman. Progress in school discipline. 1867	371.5-W98

ELEMENTARY EDUCATION.

Aber. An experiment in education. 1897	372-Ab3
Arnold. Waymarks for teachers. 1895	372-Ar6
Comenius. School of infancy. 1893	372-C73
Currie. Principles and practice of early and infant school educa- tion. 1887	372-C93
George. The plan book. Intermediate grades. 3 v. 1899-1900 .	372-G29
—— The plan book. Primary. 3 v. 1897-98	372-G291
Malleson. Notes on the early training of children. 1897 . . .	372-M29
National educational association. Report of the committee of fif- teen on elementary education. 1895	372-N21
Oppenheim. Development of the child. 1898	372-Op5
Warner. The nervous system of the child. 1900	372-W241
—— Study of children, and their school training. 1897 . . .	372-W24
Willis and Farmer. Month by month books. 3 v. 1904	372-W67

KINDERGARTEN.

Barnard, <i>ed</i> . Kindergarten and child culture papers. 1884 . .	372.2-B25
Bates. Kindergarten guide. 1897	372.2-B31

Blow. Letters to a mother on the philosophy of Froebel. 1899	372.2-B621
—— Symbolic education: a commentary on Froebel's "Mother play." 1894	372.2-B62
Boston collection of kindergarten stories. 4th ed. 1904	372.2-B65
Froebel. Education by development: the second part of the <i>Pedagogics of the kindergarten</i> . 1899	372.2-F921
—— Mottoes and commentaries of Friedrich Froebel's "Mother play." 1895	372.2-F9212
—— Pedagogics of the kindergarten. 1895	372.2-F92
—— Songs and music of Friedrich Froebel's "Mother play." 1895	372.2-F9211
Gregory. Practical suggestions for kindergartners, primary teachers, and mothers. 1893	372.2-G86
Hailman. Kindergarten culture. 1873	372.2-H12
Harrison. Study of child-nature from the kindergarten standpoint. 1892	372.2-H24
Hubbard, <i>comp.</i> Merry songs and games for the use of the kindergarten. 1887	372.2-H86
Kriege. The child, its nature and relations: an elucidation of Froebel's principles of education. 1872	372.2-K89
Lindsay. Mother stories. 4th ed. 1903	372.2-L64
Marenholtz-Bülow. The child and child-nature. 1894	372.2-M33
Poulsou. Holiday songs and every day songs and games. 1904	372.2-P86
—— In the child's world. 1893	372.2-P861
—— Nursery finger plays. 1893	372.2-P862
Riggs. Children's rights. 1892	372.2-R44
Riggs, <i>ed.</i> The kindergarten. 1893	372.2-R441
Riggs and Smith. Froebel's gifts. 1895	372.2-R4411
—— Froebel's occupations. 1896	372.2-R4412
—— Kindergarten principles and practice. (The republic of childhood, v. 3.) 1896	372.2-R4413
Shirreff. The kindergarten at home	372.2-Sh61
—— The kindergarten: principles of Fröbel's system and their bearing on the education of women. 1889	372.2-Sh6
Smith. Children of the future. 1898	372.2-Sm6
Walker. Varied occupations in string work. 1896	372.2-W151
—— Varied occupations in weaving. 1895	372.2-W15
Walker and Jenks. Songs and games for little ones. 1887	372.2-W1147
Wiltse. Kindergarten stories and morning talks. 1898	372.2-W71

PUBLIC SCHOOL SYSTEM.

Bradbury. The Cambridge high school: history and catalogue. With its early history [1847-56], by Elbridge Smith. 1882	379-C14
Brown. The making of our middle schools: an account of secondary education in the United States. 1903	379-B81
Chancellor. Our schools: their administration and supervision. 1904	379-C36
Craik. The state in its relation to education. 1884	379-C845
Dodge. Our common school system. 1880	379-D663
Eliot. More money for the public schools. 1903	379-El43
Hinsdale. Horace Mann and the common school revival in the United States. 1898	379-H59
Hughes. The making of citizens: a study in comparative education. 1902	379-H87
Johnson. Old-time schools and school-books. 1904	379-J621

Martin. Evolution of the Massachusetts public school system. 1894	379-M36
National educational association. Report of the committee of ten on secondary school studies. 1894	379-N21
Pickard. School supervision. 1890	379-P58
Rice. Public-school system of the United States. 1893	379-R36
Ware. Educational foundations of trade and industry. 1901	379-W22

TEACHING OF SPECIAL SUBJECTS.

READING

Badlam. Suggestive lessons in language and reading for primary schools. 1897	372-B14
McMurry. Special method in primary reading and oral work with stories. 1903.	372-M22
Laing. Reading. 1901	372-L14

LANGUAGE AND LITERATURE.

Breul. Teaching of modern foreign languages in our secondary schools. 1899	407-B75
Carpenter, and others. Teaching of English in the secondary school. 1903	420-C22
Chubb. Teaching of English in the elementary and the secondary school. 1902	428-C47
Gouin. Art of teaching and studying languages. 1892	407-G72
Hinsdale. Teaching the language-arts. 1896	407-H59
McMurry. Special method in the reading of complete English classics in the grades of the common school. 1903	807-M22
Rolfe. Elementary study of English. 1896	807-R64
Sweet. Practical study of languages. 1900	407-Sw3

NATURE STUDY AND SCIENCE.

Bailey. The nature-study idea. 1903	507-B15
Birds, List of books on. In <i>Cambridge Public Library Bulletin</i> , March, 1901	R
Carter. Nature study with common things: an elementary laboratory manual. 1904	580.7-C24
Cornell university. College of Agriculture. Teacher's leaflets on nature-study, nos. 1-22. 1896-1901	507-C81
Engell. Outlines in nature study and history. 1900	507-En3
Ganong. The teaching botanist. 1899	580.7-G15
Harris. How to teach natural science in public schools. 1895	507-H24
Hodge. Nature study and life. 1902	507-H66
Howe. Advanced elementary science: part 2 of Systematic science teaching. 1900	507-H831
———. Systematic science teaching. 1894	507-H83
Jackman. Nature study for the common schools. 1892	507-J13
McMurry. Special method in elementary science for the common school. 1904	507-M22
Smith. Teaching of elementary mathematics. 1900	510.7-Sm5
Wilson. Nature study in elementary schools. 1897	507-W69

HYGIENE AND SANITATION.

Bancroft. School gymnastics with light apparatus. 1901	371.7-B22
———. School gymnastics, free hand. 1902	371.7-B221

Burrage and Bailey. School sanitation and decoration. 1899	371.6-B94
Colburn. Graded physical exercises. 1901	371.7-C67
Harvey. Teacher's manual of physical exercises. 1894	613.7-H26
Lincoln. School and industrial hygiene. 1890	613-L63
Lishman, <i>ed.</i> A drill book for elementary schools. 1901	371.7-L68
Massachusetts emergency and hygiene association. Six lectures upon school hygiene. 1886	613-M38
Rowe. Physical nature of the child and how to study it. 1899	612-R79
Shaw. School hygiene. 1901	371.7-Sh2
Stoneroad. Gymnastic stories and plays for primary schools. 1898	613.7-St7

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